THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME VI
NUMBER 10

DECEMBER, 1898

WHOLE
NUMBER 60

REPORT OF THE NEW ENGLAND ASSOCIATION OF COLLEGES AND PREPARATORY SCHOOLS

THE thirteenth annual meeting of the New England Association of Colleges and Preparatory Schools was held in the High School, Springfield, Mass., on Friday and Saturday, October 14, and 15, 1898. The attendance was somewhat less than in some years, but was representative of all the New England States. The pleasure of the meeting was much heightened by the attractiveness of the new edifice within which the sessions were held.

FRIDAY AFTERNOON

The association was called to order at 2:45 by vice president Edward G. Coy, head master of the Hotchkiss School, who presided throughout the meeting in the absence of the president, Dr. Cecil F. P. Bancroft of Phillips Academy. The secretary was Ray Greene Huling, head master of the Cambridge English High School.

The Chair was authorized to appoint the customary committee on nominations. This committee, as subsequently announced, consisted of Mr. Charles E. Fish, of the Waban School, Mr. Joseph H. Sawyer, of Williston Seminary, and Mr. A. Eugene Nolen of the Fitchburg High School.

The Chair then introduced Professor George Harris, of the Andover Theological Seminary, whose subject was

THE TRAINING OF THE IMAGINATION IN EDUCATION

PROFESSOR GEORGE HARRIS: This paper is at least an illustration of the subject, for nearly all that is offered, as you will discover, is the product of imagination. I have had no other experience in teaching than that which is afforded in a theological seminary composed of students who for better or worse have passed through and beyond secondary school and college. It may, therefore, prove that studies which I assume to be wanting are already pursued and that I shall only display my own ignorance of the objects and methods of present day education. It certainly is with extreme diffidence that I present suggestions to those who for years have made education a study and a profession. There may, however, be some interest and possibly some advantage to you in knowing an outsider's impression of the results of education as he sees them in men now at large that are the finished products of your schools.

The choice of subject for this occasion is significant. It indicates, apparently, a felt lack in education. It seems to mean that, whatever may have been done, and well done, on lines of definite knowledge, something pretty important has been left undone, and something that pertains to real culture. The sentiment is abroad that education does not educate, that American men and women, especially men, have but slight results to show for their years of academic life. While certain studies have been pursued and a modicum of knowledge remains, yet well trained and cultivated minds are the exception. Whether this opinion is justified by the facts or not, it certainly is widespread. Now, the fault, if fault there is, may be chiefly due to almost exclusive discipline of the understanding and to comparative neglect of the imagination.

In the common and large meaning of the words understanding and imagination are clearly distinguished from each other, signifying, respectively, the technical, the accurate, the logical on the one hand, and the æsthetic, the poetic, the prophetic on the other hand. Assuming for the moment this broad

distinction as that which your committee had in mind in proposing the subject, it is evident that our inquiry goes down to the roots of education and does not pertain simply to a single branch of it. You cannot, then, go briskly about this business to insert training of the imagination as you might insert trigonometry. The training of the imagination is not a single specific discipline like triangulation, but pertains to various lines of culture. Possibly some educators, having learned at this meeting that the imagination needs training, will say: Go to, we will put that in on Tuesdays and Fridays from eleven to twelve o'clock with a written examination at the end of the year. Perhaps they will unroll the psychology chart, turn to the period of adolescence, find the imaginative apperceptions, trace the ducts of nerve-discharge, and turn on the appropriate streams. Even that might be better than nothing. Other educators who scorn literal, mechanical detail, who maintain that fullness of being, richness of life, the symmetrical ideal of intellect, character, and spirit, the complete man, is the object of education, may be reënforced in their opinion that the training of the imagination is pretty much the whole of education. I hope to be able to steer a course between those extremes, in your good company, and, at all events, there have now been enough preliminaries.

Nearly all children are imaginative; at least, it seems so. They live in imaginary even more than in real situations, and scarcely know which is which. They are sometimes accused of lying when, in fact, they do not know the difference between the real and the imagined. Many adult liars believe that their lies are the unvarnished truth, their fault being an untrained imagination. Stevenson argues that more truth may be had from the habitual liar than from the accurate man. Imagination in sports is either imitative, the child choo-chooing across the floor and slowing up at chair and fireplace, or partly imitative and partly creative; often of the horrible in games of killing, the blindfolded victim having been enjoined to say his prayers; sometimes of the heroic, the child acting the part of Siegfried or of Hobson; sometimes of the beautiful in garlands and dances as fairies,

although more frequently, with dishevelled hair and smeared faces, as witches. Play is nine parts imagination to one part reality. Professor Wundt says that with children all is imagination. But, as the years pass, this domain is invaded by the understanding which encroaches more and more, under the guise of useful knowledge, occupying part of the territory with the alphabet, another part with numbers, another with grammar, and so on, until the garden of the Lord becomes a waste wilderness, save for the oases of recess and vacation. So they come to your schools, knowing how to divide fractions and to extract the square root, able to distinguish a verb from a noun, but unfed with the wealth of imagination which, as they outgrow fanciful sports, they should inherit. Our subject should lie as heavily on the conscience of teachers in the common schools as on yours, but all they have to answer for in arrested development of both imagination and understanding lies outside our province.

When students leave college it is too often the case that, even if they have gained some accretions of knowledge, they have lost zest for study, and have no greater fund of conversation than athletic games, clothes, college societies, and amusements. At least this is true of so many students that one of them who is interested in books, art, music, or even politics, is the welcome exception.

I suppose that, before going farther, I should define imagination. I wish I could. Perhaps, though, an attempt to get the thing inside a definition would convert it into some wingless creature of the understanding, and it would not be imagination at all. I might say of it as Augustine said of the eternity of God, "If you do not ask me I know, if you ask me I cannot tell." According to the psychologists it is the power of calling up mental images of objects previously known—the image-producing faculty—a wonderful power, yet not essentially different from memory. Popularly, it means that and more. It can see an image without the imperfections of the original object; from fragments can create a unity without ever having seen it; with a foot or a claw can picture an extinct mammoth bird; can join

together facts of history and perceive tendencies to which the actors were blind; can combine separate images into a whole that never existed; can recombine images suggested by facts into new images at the second remove from facts.

The musician out of three sounds can frame, "not a fourth sound, but a star."

> And, as imagination bodies forth
> The forms of things unknown, the poet's pen
> Turns them to shapes, and gives to airy nothing
> A local habitation and a name.

There is the mechanical imagination, slavishly imitative, uncreative, Chinese; the mechanico-constructive imagination of the inventor; the scientific imagination which, with the small capital of surviving fossils, recreates a fauna and a flora, sees an age-long evolution, and foresees a frozen, uninhabited planet; the æsthetic imagination which, seeing the beautiful that exists, perceives beauty which never existed; the ethical imagination which, knowing only actual imperfect men, creates the ideal of perfect character; the religious imagination which anthropomorphizes humanity's best into God and then sees that man was made in God's image, that the type has suggested but not created the prototype, of which the human type is but a pale copy. Imagination may have to do only with the real, with what has been or is, seeing through the explorer's eyes an Arctic region, seeing through the eyes of Victor Hugo the iniquities of the Middle Ages; or it may have to do with the ideal, seeing the new heavens and the new earth wherein dwelleth righteousness.

Ignoring the possible presence of exacting psychologists, you will perhaps agree with me that the imagination of which we are thinking is the *idealizing* power, the perception and appreciation of the ideal. In the part it sees the whole, in the imperfect the perfect, in the good the better and the best. This is true of the æsthetic in art and music, of the ethical in poetry and religion, of the biographical in character and deeds, of the world's real literature, ancient and modern, all of which appeal to the understanding, but also appeal to the imagination; to the

real, but also to the ideal. For example, a picture is so much canvas and paint. The ingredients are known. The canons of art—true drawing, correct perspective, coloring—are understood. But when the paint is distributed on the canvas beauty is expressed, and appeals to the sense of the beautiful in the beholder. Works of art satisfy and delight because harmony, unity, wholeness are depicted. Ideal perfection is seen in the statue, the symphony, the poem. We are charmed by the whole, rounded, perfect ideal of beauty. Imagination is a ladder, whose feet are planted on the ground, but which scales the heavens, with angels ascending and descending. And the angels are not sprites, nymphs, fairies, but perfect ideal characters. Fancy pictures strange creatures "and mingles all without a plan." Imagination perceives the intelligible and beautiful ideal. So we will rest content, leaving much unsaid, with regarding imagination as having to do with the human ideal, an ideal which is intellectual, emotional, æsthetic, ethical, and religious. It may be that in taking so broad a range I am missing the purpose of the discussion. The intention may have been to consider a particular mental faculty in a strictly psychologic way and to prescribe the method of its cultivation after a purely subjective fashion. In fact, an excellent critic to whom I have read this paper insists that, while I introduce a number of interesting topics, there is nothing in it about the imagination. If that is so, you will have to reconcile yourselves to the loss of a half hour, after which you can proceed to the real business of the meeting. The view I have taken opens various forms of culture, which I shall indicate a little later in an objective, concrete, and somewhat desultory manner.

Now it is obvious, if imagination is what I have suggested, that the object of training it must be something other than utility, something more than fitness for a bread-winning pursuit or profession. While I would not imply that the idealizing power is unimportant to success in a pursuit, still a different and higher object is in view, an object, indeed, to which success in occupation is, or should be, a means. The object, or at least a

principal object, is *enjoyment*, the full enjoyment of which one is capable. If the word enjoyment seems too suggestive of the selfishness of pleasurable sensations, I am quite willing you should substitute the enrichment, the fullness, the nobility, the beauty of life. Although these terms in themselves are vague, yet in contrast with utility they are sufficiently definite. My own preference, however, is for enjoyment, for the true eudemonism. A man may find enjoyment in his money or professional success, but a true man — and how significant the expression is — should *enjoy himself*, and not merely the thing he has wrought, which is external to himself. A man's life should not be summed up in delving, casting accounts, building railroads, pleading cases, or in teaching others to do those things. A man of culture has enjoyment in himself. True enjoyment, or if you please, fullness and completion, is in the satisfaction of those powers which can be satisfied only from the open sources. Man is all the time an æsthetic, moral, and religious being, and part of the time an intellectual being. A full life demands literature, art, moral and religious ideals. A man, it is often said, should be above his pursuit; but above a pursuit is no elevated vacuum, and, if there were, one could not live in it. To be above a pursuit one must be enriched with the mental and spiritual creations of imagination and with knowledge of the truth. Acquaintance with the best literature, with art, with great and good characters, with the truths, ideals, and duties of religion, is essential to the enjoyment and fullness of life, or at least acquaintance with some of those sources which furnish the human ideal of perfection and beauty.

Think now of the men you meet, professional and business men, that are graduates of colleges. Are they interesting in conversation? Yes, on their lines of affairs, of occupation, of politics. The lawyer can talk well about cases he has tried; the doctor about cures and operations; the manufacturer about methods and markets. Yet few of them have acquaintance with literature, music, or art. Their principal reading is the newspaper and the books of their professions. There are, of course,

marked exceptions, but nearly all of them talk shop — the dullest kind of talk. The demands of work, they say, leave no time for intellectual and æsthetic culture. I am not willing to believe that. They find time for clubs, and, while they do nothing bad at the clubs, they do nothing that promotes culture. It is difficult to find agreeable men to fill half the seats at a dinner table; in fact, it is usually impossible, and any male creature that wears evening dress and eats with his fork is received to make the quota. In American cities and summer resorts society is, to so great a degree, a fashionable, a frivolous, and a dull function that cultivated men avoid such a waste of time and strength. It may be said, therefore, that the men one meets in society are uninteresting because the interesting men do not appear. Yet the men who do appear are graduates of colleges for the most part, but destitute of culture.

Lest this example should not seem conclusive, let me take another: A cultivated clergyman in a New England city of twenty thousand inhabitants tells me that there are only three men in the place who stimulate him, and that two of them are clergymen, yet that there are nineteen college graduates in his own congregation.

On public occasions other than political and commercial, when an interest of education, literature, or philanthropy is to be promoted, who are the speakers? Clergymen. In a college town or in a city near a university a professor is brought forward, but in other towns reliance is placed, not on lawyers, physicians, educated business men, but on preachers. Life is so narrowed to the utilitarian, especially the commercial, that little room is made for intellectual, æsthetic, educational, moral, and religious interests.

How many educated men know or care anything about music? The majority of attendants on musical entertainments are women, and the minority is made up largely of professional musicians, young students of music, and critics. We leave music, art, and literature to the women, showing that we are barren on those sides which comprise so much of the enjoyment

and enrichment of life. In comparison with educated Germans, we suffer in this respect. They have their defects and limitations, but they have æsthetic appreciation and enjoyment. They love good music. They are constant attendants on concerts and operas. Small towns have good orchestras that render classical compositions which, not only to university men, but to the people generally, are a delightful and indispensable part of life. Beer and music are washed down together, but it is one mug of beer to an overture or symphony. The beer is a concomitant also of the social, for the German takes his family with him to the Concert-Saal and finds the families of his neighbors at the tables about him. While the musical public of this country has in recent years been increasing in numbers and improving in taste, there is still a marked contrast between Europeans and Americans. A similar contrast exists, although not in so marked a degree, in respect to art and literature. The Germans have something we do not have. That something is on the lines of imagination. They are more æsthetic, more ideal than we. An American is a practical man, a shrewd man, an enterprising man. Many a German is *ein innerlicher Mann, ein geisterlicher Mann.* I need not linger to observe that I am not speaking of every American nor of every German. I do not know that Germans are more interesting than Americans, but they have more interests which are above the utilitarian.

I am suggesting a not inaccurate picture of American society and culture. If I am mistaken I shall be only too glad to be corrected. There is success in pursuits. There are able lawyers, skillful physicians, enterprising manufacturers, sagacious politicians; but that which raises a man above his pursuit, that which makes life worth living is not well provided. What is it besides the utilitarian that men should have for the enjoyment, the enrichment, the idealizing of life? We can more easily determine what can be done in school and college if we first recognize the needs which are life-long, so at the risk of a little repetition later, I briefly indicate some of these needs.

Literature, the best literature of one's own language, if no

more, is the principal source of culture for ministering to the imagination. A taste for poetry, fiction, essays, and history enriches and idealizes life. A half hour with Shakespeare transports the reader into another world, the world of deep sentiments, of the strong passions and high aspirations of humanity, the world of the ideal. It is the half hour of one's intellectual devotions, refreshing the mind as prayer refreshes the spirit. The lawyer or man of business who knows his Browning, Fitzgerald, Emerson, is raised above the sordid to the ideal. All educated men, and many who are not educated in the schools, may have the enjoyment of literature, for it makes a universal appeal.

The æsthetic arts — painting, sculpture, architecture, and music — are not as generally appreciated, for there is greater difference of endowment than in respect to literature. Yet more people than we suppose are capable of enjoying and even rendering music (as I shall suggest when we finally consider courses of study in college), and music is one of the most available means of æsthetic enjoyment. Painting, sculpture, and architecture are not so accessible as literature and music, but foreign travel enables one to enjoy them, and in our large cities there are now very good collections. The love of pictures is almost universal. When a loan exhibition of paintings is opened at the South End in Boston, throngs of manual laborers take the trouble to procure tickets, and comply with the request to indicate preferences, the best pictures always having a majority of votes. Wealthy men that collect fine paintings become more interested in pictures than in business. In fact, almost any avocation which is intellectual, artistic, scientific, or literary elevates and idealizes.

The moral and religious appeal to the imagination. Morality is the human ideal of character. Religion is the divine ideal of perfection. The moral ideal is found in life more than in books. So is religion. Yet every great religion is a book-religion. Christianity has its Bible. The English translation of the Bible is the best literature of the language. For multitudes of people familiarity with it raises life above the commonplace into the ideal. The church, with its preaching and its religious

activities, is the intellectual and æsthetic as truly as it is the spiritual salvation of the people. The Bible and Bunyan have furnished the Puritan stock with no mean culture. But there are many graduates of colleges, a majority, I fancy, who have never read a tenth part of the Bible, who are ignorant of its history, poetry, prophecy, and doctrine, who know it only from chapters and texts heard in church. Some of the best literature is partly unintelligible to those who are ignorant of the Bible. Shakespeare, Milton, Browning, Emerson are felicitous in allusions to Scripture. To be sure, many expressions of the Bible have passed into current speech, yet one should be saturated with it to appreciate the best literature. If the Bible as literature is important in promoting culture, how much more in presenting the ideal of character, the conception of society, and the vision of God.

The mode of training the imagination has been indicated more by suggestion and illustration than by definition and argument, and I might proceed at length on the lines that have been traced. But the time that remains must be devoted to the inquiry, What can be done in school and college to promote this object?

To see what is needed is half the battle. If the importance of training the imagination, that is, of cultivating the ideal, is recognized, a way of culture will be found. The sources can at least be opened, the intellectual, æsthetic, moral, and religious ideals can be held up, and so imagination can be awakened, or rather, reawakened, and developed. Many of the boys come from the public schools. The total result of a common-school education, according to my observation, is deadening of interest in study. The greater part of the course is as arid as the desert of Sahara, and in all studies method seems more important than object. At the end, not one in fifty has any taste for reading or any incentive to further study. Child and adolescent psychology (as yet ill-digested), imposes the task of teaching, not actual but theoretic children, the only point at which imagination has unrestricted play. Upon the youths who have thus

suffered, you must work the miracle of giving sight to the blind and hearing to the deaf. Your schools and colleges teach classics, mathematics, English, history, science, philosophy, and political economy. Some of those disciplines, perhaps all of them, are well adapted to the training of the imagination, for even mathematics has an ideal side in perfection of line and form. Certain studies distinctively æsthetic might well be added, as I shall suggest in a moment, but reliance must be placed chiefly on the existing curriculum.

There is a way of teaching language, science, history, and literature which promotes, and a way of teaching which deadens imagination. Study of a language may have either result. Language is recorded life. When only the grammatical structure is mastered, it is a dry skeleton; when the life it embodies is appreciated, it breathes and palpitates.

The history of Greece, with its heroes, its art, its poetry, its ethics and philosophy may be made no more interesting than a railway time table, or may vivify a noble and beautiful ideal which appeals mightily to the imagination. Burne–Jones acknowledged vast indebtedness to Dr. Prince Lee, the head of the King Edward's School, for revealing the beauty of Greek literature. "I might say," he once remarked, "that I swam right into that deep wonderful sea of Greek literature and pagan mythology: and just as I have never forgotten my first visit to France, which gave me a sense of the poetry of background, or my first visit to Siena, where I found my spiritual ancestry in art, so I never can forget my introduction to the beautiful pagan mythology and lovely legends and literature of Greece."

English literature is the best means of training the imagination of English speaking students. Fortunately there is a revival of interest in its value for culture, a revival which has great promise. But the very fact of revival indicates a strange neglect. To tell the truth, I would rather turn a bright boy loose in a good library and take the chances than limit him to the English courses in some of the colleges. Let me give you a bit of experience. A few years ago I found that some of the stu-

dents in Andover Theological Seminary were not well acquainted with modern English poetry, that they knew little Tennyson and less Browning. I proposed a club for the study of theology in literature. On Monday evenings those members of the Middle Class who were so disposed, and all were disposed, came to my house. Each evening one read an extended paper on certain poems or romances and afterwards there was free discussion. We spent four evenings on Tennyson, four on Browning, two on Hawthorne, and so on, studying Emerson, Shelley, Matthew Arnold, Kipling and others. Enthusiastic interest has been shown every year and to some of the men the literature was a complete revelation. They knew something *about* English writers, especially early writers, but had not really heard the message of contemporary authors. They all declare that these studies are of more value than any course in the theological curriculum. Now the majority of these men are recent graduates of New England colleges, and all of them, as might be expected of students intending to be preachers, had taken the classical, not one of them the scientific course. While I would not generalize too broadly from a few cases, yet since Andover men are by no means below the average of college graduates, and since seven years repeat substantially the same story, the experiment is significant as a commentary on the teaching of English in colleges. In fairness I ought to add that in every class are some men who know and love English poetry, and that each year their number increases. There has also been an evolution, as it were, from year to year, a clearer discrimination, a wider knowledge, a deeper appreciation, showing, perhaps, that in the last seven years the colleges have done more and better for them.

Let me emphasize again the value of the English Bible for the imagination. The Bible is not so sacred as religion that it may not be studied as literature. Why should not the sublime prophecies of Isaiah, the devotional poetry of the Psalms, the meditations of John, the theology of Paul, the parables and precepts of Jesus be studied as carefully as the poems of Homer and Horace, the orations of Cicero and Demosthenes? Yet the col-

leges, at most, provide instruction in the original tongues of the Old and New Testaments, and do not, so far as I know, make the Bible part of the English course. The public schools are necessarily debarred from teaching the Bible, but secondary schools and colleges are not.

The essentials of education, after all, are reading and writing; real reading of authors and not merely learning something about them, with much writing to form a style and to train the imagination. A critic of Stevenson maintains that he was a clever imitator of other writers, that he merely wrote in the style of various authors. If that is so, the imitation in most cases is better than the original. But it would be a fine discipline for students to compose themes in the style of certain writers, for it would involve a careful study of those writers to the points of familiarity, yet I never heard of such an exercise in the English department. I have said more, perhaps, than I should say about English literature since there is to be an address or paper directly on that particular subject. For a similar reason I have refrained altogether from suggestions concerning scientific studies and the observation and love of nature. My meaning in these hints is that the existing curriculum need not be radically changed, for it embraces disciplines which train imagination, but that they should be studied in such ways that the mechanism of history, literature, and classics shall not crush the ideal.

Certain additions to the course are desirable, however, especially on æsthetic lines, in appreciation of music, the fine arts and the drama. All educated men, save the few that are fit for treasons, stratagems and spoils, should have a degree of musical culture. Music has had a wonderful evolution in the modern period. The classical music of Germany, Italy and France is a creation of the last 150 years. It is the possession of the world for it speaks a universal language. But the pleasure it affords is small part of the enjoyment and smaller part of the education of Americans, although it might be cultivated, at least for knowledge and appreciation by many who consider themselves unmusical. The present supervisor of music in the public schools

of New York city, Mr. Frank Damrosch, formed a few years ago classes for teaching music to working people. A large chorus was organized, each member paying a small fee. It meets on Sunday afternoons, the only free time of most of the members, who give up harbor excursions and other entertainments for the rehearsals. As many as four thousand have belonged to it, and there is a trained chorus of one thousand voices. The difficult music of the Messiah and other oratorios is rendered without the aid of instrumental accompaniment. The rehearsals and concerts are the chief interest of the members. They have the opportunity of attending philharmonic concerts at half rates and every winter as many as five hundred seats are taken. These people will now listen to the best music only. We can hardly conceive the meaning of all this, as a pleasure in itself, as refining taste and character and as affording pure social enjoyment. Is not music needed as much by educated men and women? A boy or girl who learns to sing well or to play on an instrument not only acquires some skill of performance but gains appreciation and enjoyment of the great musical creations which appeal to the imagination. And yet till lately it has been considered effeminate for a boy to play the piano.

What now is done and what should be done in school and college? In some of the universities are chairs of music occupied by accomplished musicians. The instruction is on the model of English universities. At Oxford the degrees of Bachelor and Doctor of Music are given (called Mus. Bac. and Mus. Doc.). The students are young men preparing themselves to be choirmasters and organists in the Church of England. A considerable number, therefore, take the musical courses. Here there is no such demand for musicians that are university men, and so only a handful study music. There is no provision for the musical culture of the body of students, except occasional concerts. There should be, I think, lectures with illustrations on the composers and their works so that there may be intelligent appreciation in listening to classical compositions. There should be lectures on the influence of music in civilization and culture.

Choruses might be formed, for everybody that can sing at all likes to sing a part. I think there would be large musical associations in every college if the proper conditions were provided. I am, perhaps, saying too much on this subject, but I feel that it is both important and neglected. In primary schools and onwards more attention should be given to music. If there must be a second session daily it should be devoted to music, gymnastics, dancing and games, and the everlasting books should be shut up in the desks. As it is, there are a few trivial songs about the birds and trees, a few mechanical hymns, and "My country, 'tis of thee." Nor is it much better in the secondary schools and colleges.

It is not as easy to provide culture in painting, sculpture and architecture from lack of material. Yet there is so much inexpensive reproduction in photographs and casts that knowledge and taste can be cultivated under adequate instruction.

The drama cannot well be made part of the curriculum except as literature. But theatrical representations of a high order are much to be desired as part of education. How eager students are to produce, not only farces, but good comedies and tragedies, modern and ancient. I fancy that some students have learned more of Greek or French literature from representing characters in the Edipus or Athalie than from all the prescribed study in those languages. The stage is an educator and is so regarded in Europe. In large cities plays are given for the schools with the happiest results. Here is an account of an arrangement in Hamburg last winter:

> The conception of the stage as an educational agency, which has been quite general in Germany since the time of Schiller, has in recent years produced practical results in the shape of representations for the special benefit of pupils of the common schools. At Hamburg eight thousand children were three times (in January, February, and March) taken to the Stadt-Theater, where such plays as "William Tell," "The Maid of Orleans," and "Minna von Barnhelm" were given with an excellent assignment of parts. The seating capacity of the house being two thousand, each play had to be given four times. The price of admission had been put at six cents, and when it was found that some children could not afford even this small amount, they were provided

with tickets at the expense of beneficent citizens. It is interesting to read in the Hamburg *Jugend-Warte* the favorable expressions of teachers concerning the influence of these entertainments upon their pupils; they may be summed up in the words of one of them: "The school representations are an educational instrument of the first rank." At Leipzig and Breslau, and probably in other cities, similar advantages are offered to the pupils of the upper classes of the *Volksschulen*, though not on as generous a scale as at Hamburg.

Prince Kropotkin relates that when a child he was taken by his parents to witness the very best plays given in Moscow, and that afterwards he and his brother represented them at home with the assistance of the servants. He says that his taste in dramatic art was formed in that way and adds, "this makes me think that parents who wish to develop artistic taste in their children ought to take them occasionally to really well-acted good plays instead of feeding them on a profusion of so-called 'children's pantomimes.'"

Professor Wundt makes the interesting observation that art, especially poetry and the drama, idealizes the work of life, that, as the play of children imitates the pursuits in which they will some day engage, so the drama, significantly called the play, idealizes the pleasurable element of work. "Modern art," he says, "has found a moral and æsthetic value in every form of earnest discharge of duty, and, itself the result of a changed view of life, has thus helped, on its part, to extend and establish the new order. For the artistic exaltation of the tastes of life is of infinitely greater service than the acknowledgment of their practical import to awaken a sympathetic interest in others' lives and to enhance the value set upon human labor as such. Art has gradually taken to itself every department of life, so that the most potent of the arts—epic and dramatic poetry and various branches of the plastic arts—have now made the *work* of human life, in all its manifold forms, their special subject, for its beautifying and moralization."

Certainly there is no lack of material for cultivating imagination. Modern as well as ancient and mediæval art and poetry are more idealistic than realistic, more impressionistic than photo-

graphic. The English school of artists and poets represented by Burne-Jones, Morris, Hunt, Rossetti, Ruskin and Tennyson, is the school of imagination. The revival of Mallory's legends by Tennyson furnished subjects for the painters. Burne-Jones's "Beguiling of Merlin," and his "Tristram and Yseult" are as famous as his classical and biblical subjects. Norse mythology is the source of the Wagnerian cycle of operas. Italian art is great because religion supplied subjects which appeal deeply to imagination. The art and literature of the nineteenth century range through the realms of religious, classical and Teutonic imagination. All this creation is immediately available for training the imagination of English speaking students.

The needed additions, then, to existing courses are those studies which train the æsthetic preceptions, especially music, the fine arts and the drama, and studies in religion, notably the Bible which presents the religious and ethical ideal. If these are added, and if classics, literature and history are pursued as disciplines of imagination, the many sided human ideal will be presented.

I have not attempted to fathom the philosophy of those studies in their relation to the mind and to one another, but only to set forth an object and a method. A somewhat different point of view might have been taken. I might have shown that the constructive should have a larger place as compared with the receptive. In every study there should be cultivation of productive, originating, creating power. That is manual training in public schools, the laboratory method in science, the seminar in history, and original composition in English. Reception in order to production is the law of intellectual, æsthetic, moral and religious culture. Imagination, like every other faculty, is trained by original, productive effort, and I have therefore emphasized the literary work of writing, the dramatic work of acting, the musical work of singing and playing, as essential to the training of imagination.

It is not expected that, when one is teaching or studying literature, history, the æsthetic arts and religion, one will be

thinking constantly of the effect on imagination any more than one is always thinking of the training of observation in studying natural sciences, or of reasoning in studying mathematics. The object is to learn all there is to be learned on each subject. But the selection and proportion of studies should be determined with a view to the training of both imagination and understanding. Even so, teachers are more important than curriculum. Students that have been intellectually quickened say that they are indebted to this or that professor oftener than they say that they owe all to particular studies. The man at the other end of the bench and not the book in his hand President Garfield rightly esteemed a liberal education at Williamstown.

Should you succeed in broadening, deepening and vitalizing education, so that the real and the ideal meet together, so that understanding and imagination kiss each other, following generations will be none the less practical and all the more happy and noble.

The second address was made by Rev. Huber Gray Buehler, Master in English at the Hotchkiss School, on

THE TRAINING OF THE IMAGINATION IN THE STUDY OF LITERATURE.

MR. HUBER GRAY BUEHLER: There is, of course, no call for a discussion in this presence of the question whether the study of literature lends itself to the training of the imagination. The poet is, confessedly, "of imagination all compact;' his imaginative endowment is shared by the novelist, the dramatist, the orator, and the historian: and the reader who, guided by the printed word, understands and follows the creations of these imaginative spirits, who rises to the height of their thought and feeling, and who participates in their soul-attitudes, must do so by means of his own imagination, which is thereby exercised and trained. The practical question before us is one of procedure. In our discussion we are concerned, not that we shall try to train the imagination through literature, but that our trying shall amount to something.

But before approaching this question of procedure, it may be well to remind ourselves that the activity of the imagination is not limited to the creation of images of things seen. We speak of "the eye of the imagination," or "the mind's eye," as if the faculty in question had to do only with objects of sight. The imagination certainly has an eye, as when blind Milton wrote:

> "To confirm his words, out flew
> Millions of flaming swords; . . . . the sudden blaze
> Far round illumined Hell."

The eye, from the nature of the case, is more likely to receive general and adequate cultivation than any other organ of sensation; and therefore visual images, drawn by the imagination from the sense of sight, are the most likely to be sharp and vivid. But it must not be forgotten that if the imagination has an eye, it has also an ear, as when Tennyson says:

> "The trumpet blared
> At the barrier like a wild horn in a land
> Of echoes, and a moment, and once more
> The trumpet, and again: at which the storm
> Of galloping hoofs bare on the ridge of spears
> And riders front to front, until they closed
> In conflict with the crash of shivering points,
> And thunder."

It has also a tongue to taste with, as when Keats tells us that Prospero

> "From the closet brought a heap
> Of candied apple, quince, and plum, and gourd,
> With jellies soother than the creamy curd,
> And lucent syrups, tinct with cinnamon."

And it has a nose to smell with, as when Milton speaks of "the odorous breath of morn," and Shakespeare tells of "gloves as sweet as damask roses." Finally, imagination makes use of sensations of touch, as when Keats says that on St. Agnes' Eve

> "The owl, for all his feathers, was a-cold."

Such products of the imagination, derived from the senses of hearing, taste, touch, and smell, do much to "deceive the burthen

of life." The person whose faculty for forming them is weak does not have his imagination normally developed. To imagine only those things that appeal to the sense of sight, is to "resemble a paralytic who has lost control over all his limbs but one." Therefore we should see to it that our pupils can recall the sound of a rivulet as easily as its appearance, and instantly call up, at the summons of imagination, the taste of its water, the touch of its mossy bank, and the odor of the flowers growing near. Only when the pupil can do this is he capable of enjoying literature to the utmost. Take, for example, the following lines from Lowell :

> "We sit in the warm shade and feel right well
> How the sap creeps up and the blossoms swell;
> We may shut our eyes, but we cannot help knowing
> That skies are clear and grass is growing;
> The breeze comes whispering in our ear
> That dandelions are blossoming near,
> That maize has sprouted, that streams are flowing,
> That the river is bluer than the sky,
> That the robin is plastering his house hard by;
> And if the breeze kept the good news back,
> For other couriers we should not lack;
> We could guess it all by yon heifer's lowing,—
> And hark! how clear bold chanticleer,
> Warmed with the new wine of the year,
> Tells all in his lusty crowing!

Touch, sound, sight, taste, are all there, and odor appears a few lines below, when the poet speaks of "the sulphurous rifts of passion and woe."

But I pass on to the question of procedure. How shall we train the imagination by means of literature? The subject naturally divides itself into a consideration (1) of the choice of material, and (2) of method. With regard to the choice of material, there is fortunately pretty general agreement. Publishers have put within reach of all schools an immense mass of literature that, by common consent, is well adapted to the needs of education. In selecting from this material, only two cautions seem worthy of our attention. The first is that the

literature chosen for study should not employ visual images only. School reading books should be full of sound and odor, taste and feeling, as well as of vision; so that when the pupil wakes to the new life which literature opens to him, he may exclaim, like Christopher Sly,

> "I see, I hear, I speak;
> I smell sweet savours and I feel soft things."

The other caution to be observed in selecting literature to stir and feed the imagination of youth, is that care should be taken to choose pieces whose images—whether visual or not—are in some sense founded on and related to the reader's experience. An example of a different choice is found, I think, in the selection some years ago of the Fourth Canto of Byron's "Childe Harold" as a requirement for admission to one of our great colleges. The beauty and power of that bit of literature are unquestioned: but it consists of a series of poetical comments on objects that for the most part are familiar only to those who have traveled in Italy and read Italian literature; and the poet's imagination, playing with these far distant objects, requires for the interpretation of its images an experience outside the lives of most students. The images are not within the reach and comprehension of all men, but are intelligible only to a select few, who through travel and previous reading have received a special training for the enjoyment of the poem. Just as a person who has never seen a hill or mountain can scarcely imagine the charm to the eye and the excitement to the mind which Alpine scenery imparts, so the ordinary American boy can make little of "Childe Harold" until photographs or the stereopticon, supplemented by some cramming of history, have put him in possession of the materials with which Byron's imagination worked.

But when the question of selection has been answered the question of method remains. Supposing that the books for study have been wisely chosen, how shall we get hold of the pupil's imagination and make it follow the flight of the author's mind? With some pupils, perhaps, little method is called for. Give them the books to read, and their imagination will take care of itself.

Little pedagogical help is needed, for instance, by such boys as Barrie's Sentimental Tommy, or a little neighbor of mine, whose imagination is so audaciously active that he recently told his mother he had had "*such* a good time playing whist with God!" But not all children are thus gifted. With many the imagination is dull and sluggish, and needs to be stirred, aroused, stimulated, led. How shall we do this? How shall we make such pupils see with the author's eyes, hear with his ears, feel with his touch? The common danger is that reading only with the bodily eyes they will see only the printed words, not the ideas which they represent, and thus will walk through the galleries of the poet's mind, without stopping to see the pictures hung there. How shall we prevent this? I suggest two methods of procedure.

The first belongs to the early stages of literature work, and deals only with the visual imagination. It is to encourage, or, if you will, require pupils to express in art forms that which they are reading about. By expressing it in art forms I mean drawing it with crayon, colors, or pencil, modeling it in sand or clay, or making it with knife and hammer. The principle underlying this suggestion is that before mental images can be expressed with crayon, clay, or tools, they must become definite and clear. A boy can talk about what he sees dimly and vaguely; he can draw or model only what he sees clearly. Require him to express his vague image in tangible form, and he will discover its imperfections, and go back to his author with greater interest and wide open eyes. Working under this method, children who are reading "Robinson Crusoe" will perhaps make the famous island out of sand. At first it will be desolate and uninhabited, but when the shipwreck is reached, Crusoe will appear, perhaps, as a little tin figure. After building his hut and leading for a while his solitary life, he will be joined by Friday, and so on to the end of the island life. Boys reading the *Iliad* in English will construct Homeric weapons and draw Homeric scenes. In a New York school, children who are reading "Hiawatha," construct forest and wigwams in a corner of the schoolroom, which is reserved

for the purpose, and people these with the characters in the poem, to whom they nod in friendly recognition when they read aloud about them. In another school of my acquaintance, a class of girls who were beginning Milton's "Comus" were recently told to draw something they had read about in the lesson. Two girls sketched the "drear wood;" another chose one of Comus's transformed monsters; another caught the expression "Stygian darkness" and illustrated it with a drawing of the river Styx: another could picture nothing but Neptune's trident.

The other method of procedure belongs to all stages of the study of literature, and has to do with images of sound, touch, taste, and smell, as well as of sight. It is simply the method of judicious questioning. The aim of this questioning should be to lay bare the images in the pupil's mind, in order that if these be vague or incorrect, they may be made vivid and true. Sometimes the revelations are startling. The other day, in answer to the question, "What are ambrosial locks?" a pupil said, "sweet-smelling locks," whereupon another pupil remarked with disgust that for her part she hated hair oil! Regarding the kind of questions to be asked, the material is so multitudinous and varied that it is difficult to make definite suggestions; and perhaps this is not necessary. Mastery of the art of questioning may be taken for granted among successful teachers. Therefore I simply remark that experience has led us to adopt the plan of having some questions printed and put in the hands of pupils when the lesson is assigned. The advantage of this plan is that it stimulates mental activity while the lesson is preparing, gives the pupil time to think, brings him to the class room in a receptive mood, and, by relieving the recitation period of much questioning and waiting for answers, increases the opportunity for real instruction.

These two methods — expression in forms of art, and wise questioning — must be our main reliance in training dull imaginations through the study of literature. But before I close it may be worth while to say that we have found the stereopticon to be

a most useful auxiliary in the teaching of literature. Passing by the obvious and more common uses of the lantern, I mention two that bear directly on the education of the imaging power. The first is the employment of the stereopticon to furnish the student with the materials used by the author's imagination. Boys take a keen interest in Irving's "Alhambra" after they have heard an illustrated talk on the "Red Castle" itself; they grasp the incidents and characters of the "Lady of the Lake" much more firmly after they have viewed on the screen the scenery of the Scottish lakes; Addison's and Irving's papers on Westminster Abbey have for them meaning and beauty only after they have seen pictures of the famous church and its tombs; George Eliot's "Romola" gains immensely when the stereopticon has made Florence a real city to the mind of the boy.

The second way in which the lantern can be used in the training of the imagination is, after a class has read such literature as the Sir Roger de Coverley papers or "The Ancient Mariner," to throw on the screen Hugh Thomson's illustrations of the former, and Doré's illustrations of the latter, and then invite the class to compare their own imaginings, formed from the reading of the text, with those of the illustrators. Never yet have I found a class that did not infinitely prefer the word pictures of Addison and Coleridge, and criticise intelligently the interpretations by Doré and Thomson.

Such are a few suggestions on a vast subject. In conclusion let it be said that our success in arousing interest in literature, and love for it, will be commensurate with our success in arousing the imagination of our pupils. Great authors dwell with an absorbed and controlling enthusiasm in a world of images which their imagination summons or creates; and love of reading is little else than passion for this same image-world. Before our pupils can feel this passion they must know that world.

The third address was presented by Professor John M. Tyler, of Amherst college, on

THE CULTURE OF THE IMAGINATION IN THE STUDY OF SCIENCE.

It is with a great deal of humiliation, and really with reluctance, that I come before this audience after the addresses to which you have just listened. I should be sorry to have you think of science, or the scientific man, as well represented by the picture of the man with the muck-rake in the Interpreter's House in Pilgrim's Progress. You have had the imagination pictured before you as an angel of light, and have heard the rustle of her wings. You have seen her as a great goddess, walking with flowing robes over Olympus, or Parnassus, or I know not just what mountain. I want to speak of imagination; but my heroine, I am sorry to say, does not appear either with wings or in flowing robes. She is what we call, in the present day, a "work lady," and she is dressed in homespun, and she is useful even more, perhaps, than she is ornamental. I have been trying, ever since I heard the opening phrases of the first speaker, to reach up my poor muck-rake and pull down a golden crown to put upon her head, but I have not been able to do it, and so I must introduce her to you, as she is, a plain helper in everyday work.

"Imagination," says Wundt, "is thought by means of images." The material or food for thought must have been already stored up for us somewhere in the mind, is represented to us by memory aided by association, and to these old percepts imagination gives a new form or grouping.

We perceive objects, we think about their relations. When we recollect an object, a man for example, we very likely find that certain parts, features, or characteristics are far more clearly represented by memory than others. You ask me if I remember A. After a little thought I answer: "he was the little man with the big nose, was he not?" When A's nose has once emerged in my memory, other features and traits follow rapidly until finally I have a fairly accurate picture of his physical, mental, and moral structure. Thus far there has been memory and association, but very little, if any, true imagination.

But we have seen that even in memory objects tend to become dissociated, broken up, and to emerge piecemeal, so to speak. But we always tend to dissociate objects by fixing our attention, first on one part then on another. As A sat in the class room his nose may have attracted my attention earlier and more frequently than any other feature. These dissociated fragments or parts are the material with which imagination works.

Imagination combines these *disjecta membra* furnished by memory, association, and dissociation or analysis, and produces an image entirely new to me, which may, or may not, correspond to any existing objective reality. It has not merely *re*produced, *re*presented; it is productive, constructive, in a sense, creative.

When we think about an object we are tracing its real or possible relations, trying to place it in its proper setting in regard to a host of other objects. And the relations or setting of an object can be viewed from almost innumerable different standpoints with widely different results.

Finally, imagination is *pictorial* thought. But the mind can form an image of objects never perceived by the eye. I can imagine a pain, choral music, or even a taste or an odor; in a word, anything which is presented by the senses. I cannot imagine abstract truth. For abstraction has removed many of the details on which the picture of the imagination depends for its vividness.

The work of the imagination is, therefore, to relate or combine by means of mental images objects, or parts of objects, perceived by the senses and represented by the memory aided by association. Our question is, to what extent does science cultivate or require such a function?

We notice that natural science deals with objects perceived by the senses. Furthermore, the first task of the scientist is to analyze his material into its parts or elements. The biologist dissects, the chemist analyzes, the physicist traces molecular structure or forces. All three busy themselves with the relations of these parts, elements, or forces, and recombine them in new

and different relations. And the relations and combinations of these material objects and the working of their forces are eminently adapted to pictorial representation. We can hardly imagine a mental power better suited for the material and modes of scientific investigation. Does the scientist use it, or ought he to do so?

Stanley is sailing northward on an unexplored river. He thinks he is on a branch of the Nile. The river broadens and sweeps westward, and Stanley sees himself crossing nearly the whole breadth of the African continent and coming out at the mouth of the Congo into the Atlantic Ocean. To recognize thus early his position in a vast, unexplored wilderness, was even more a feat of the imagination than of judgment.

When I studied geography I learned to bound all the states and territories. I committed to memory the names of all capitals, principal towns, rivers, mountain ranges, and chief products. When a river or mountain chain reached the boundary of the state, it disappeared, to reappear at a later date as if by magic, and sometimes under a new name, in some neighboring state or territory. If you had asked me how to go from Boston to Chicago, I could not have told you; for, while I had been studying Illinois, then one of the western states, the middle states had all sunk in oblivion and left only a blank. I was like the New York militia: I could not be moved out of the state where I belonged. Now, every child in kindergarten has journeyed in his imagination all over the world. He has visited the capitals, climbed the mountains, sailed the rivers, explored the fields, mines, and forests. He likes geography, and will not forget it. Best of all, it is of some use to him.

Every invention is as much a work of the imagination as of ingenuity. Everybody had seen, though very few had noticed, that children's shoes wore out first at the toes. One man put to himself the famous question solved by the deacon in building his one-horse shay: How can I make that part wear as long as the rest? And he solved it by imagining various caps on the toes of the shoes. I do not mean to say that he communed with

himself in words, saying: Go to now, let us imagine various substances on the toe of that shoe. He used his imagination as unpremeditatedly as a shoemaker picks up an awl. He finally selected copper as the suitable substance. And the copper-toed shoe brought a fortune to the inventor and made everybody wonder that he had not thought of it himself. And what is true of the copper toe of the shoe applies equally well, though in a far higher degree, to Watt's steam engine, the Jacquard loom, and to every machine. The model must exist and work in the imagination of the inventor before it can be even drawn on paper.

The geologist investigates a world never seen by human eye. He sees it a molten globe, then covered with an almost unbroken and shoreless primeval ocean. He sees continents emerge, and grow, and take their definite shape. He tells us of great mountain chains rising and then wearing away under the denuding power of water and ice. The palæontologist peoples this globe with a succession of strange plants and animals, and tells you of their structure and relations and modes of life. Take away imagination, and what has become of your palæontologist and geologist?

Turn to physics. You have all, I suppose, read Mr. Tyndall's lecture on the "Use and Limit of Imagination in Science." You remember how he begins by describing the waves produced by a pebble falling into smooth water. From these he proceeds to waves of sound and light, to the subjects of reflection and refraction, and explains the blueness of the sky by motes invisible even under the highest powers of the microscope. He does not describe; he paints. It is a panorama, rather than a lecture. You *see* the ether waves reflected or bent as clearly as you have ever seen an ocean wave break on a stony beach.

Perhaps zoölogy may seem to afford less opportunity for the use of the imagination. Let us see: The student is studying a very prosaic grasshopper. He observes its external form and structure and then dissects it. He studies it until he can see in his imagination a transparent model of the whole animal, and can

describe the relative position of all its parts as seen from above, below, or in section. Then, perhaps, he studies its physiology He sees the nerve wave proceeding to the nerve center, and thence along a motor nerve to start the microscopic engines in the muscles. He watches the dissolving of food in the intestine, observes it passing out into the blood to be caught by the whirlpools of the individual cells. He sees the waste come whirling out again to be cast out of the body. And yet not one of these processes is visible to the eye of sense. If he will attempt to discover what is going on in the cell, he can begin to understand the processes only when he has pictured all the changes in his imagination. When we question him about any structure or process, we ask him not: "Do you know or understand?" but, "Can't you see?"

But the student wishes to know the anatomy of a fly or spider, and perhaps he has no time to dissect these. He reads a description of them, notices wherein they differ from the grasshopper, modifies in these respects the model already formed in his mind, and thus gains a picture or model of these forms also. He makes a thorough study of but comparatively few forms, and then mentally constructs a very fair representation of all other animals as soon as he has heard them described or seen pictures of them.

He wishes to learn how the grasshopper develops from the egg. He studies sections of the successive stages under the microscope or the illustrations of monographs. The imagination combines these into representations of the successive stages and of the changes from one to another.

Suppose that the zoölogist had to memorize descriptions of all these forms and stages, how much of such wordy stuff would the memory retain? But the mind affords an indefinite wall-space for pictures. It never wearies of them or allows their essential features to become blurred or indistinct.

When we notice what a store of pictures the mind carries with it, and the strength of its tendency to think in images rather than in words, we cannot help seeking some explanation

of so striking a fact. We have all noticed the great power and ceaseless play of the imagination in young children. I cannot resist the temptation to hazard the query whether this habit of pictorial thought is not an inheritance from our old brute ancestors, who had to think in images because they had not yet attained the power of articulate speech. Certain facts, at least, seem to me to strongly favor such a conjecture. But here we have no time to follow or enlarge upon it.

Our student has been using his imagination, but only as a means of learning and retaining a wide range of mere dry facts of anatomy, physiology, and embryology. But if he stops here he is a mere drudge, a collector of facts, whose meaning and relations are hidden from him. He is still dealing with particulars. He has made no generalizations, arrived at no laws, caught sight of no development. He has a clear vision of most valuable food for thought, but he has not yet begun to digest it and really think.

As Professor Hardy has said, "To see is not enough, to explain is everything. The discovery of a germ is important; but vastly more so is its unknown relation to that other fact, the diseased organism. And until observation can answer we imagine." The investigator begins by picturing in his mind all possible relations between the germ and its host. The image of a poison secreted by the germ occurs among others. The pictures and conjectures with which he has thus far been groping into the unknown can hardly be reduced to the form of conscious reasoning. Soon the image of a poison, a ptomaine, secreted by the germ gains in distinctness and plausibility. He must imagine and then test its working. But only after the conjecture is clearly pictured before the mind can there be real judgment and generalization. First comes the conjecture pictured by the imagination, then logic and reasoning, then the test by observation and experiment.

This is the necessary order of discovery, and it is the best order for the student who will follow in the footsteps of the discoverer. It is, and must be, the path of the discoverer. His

mind must work pictorially. When we work merely with words and descriptions, the mind very quickly wearies. It is slow, dull, dry, hard, work; and we labor against an ever increasing friction and resistance. We plod along, taking up one detail after another; or gain a general concept only to find it barren and repulsive. Then the imagination comes to our relief. The picture rises before us in all its fullness of concrete detail, reality, and life. We begin to feel interested. The interest dispels our weariness, rouses up our flagging will, and we work with enthusiasm. The picture, unlike the dead abstraction, lives and works. The forces or influences which radiate from, or beat upon it, tempt us to calculate their results. At first the pictures shift before our minds as rapidly as in a kaleidoscope. But gradually those features which best conform to all our past experience and observation begin to persist and compel the details to group themselves around them. When the picture has gained a certain degree of completeness and stability, it gives us a working hypothesis which we can put into words. And the clearness of our expression of the working hypothesis will be proportional to the clearness, accuracy, and vividness of the picture furnished by the imagination.

But the vividness of pictorial thought has another great advantage. Whether or not we accept the theory of physiology that the stronger stimulus of certain cells in our brain causes stronger outgoing currents which pour not only along old courses but into a multitude of new channels — however we may explain it, there is little doubt that a vivid impression awakens the mind to new relations hitherto unperceived. And the discovery of a new relation may revolutionize all our modes of thinking. The newly discovered relation of the falling apple to the moon led Newton to the discovery of the law of gravitation. And when Archimedes saw in the water of the bath not his body but the king's crown, he ran naked and shouting through the streets of Syracuse. The picture of imagination may be like the flash of lightning which at once illumines all that was before shrouded in darkness.

And the student, if wisely taught, follows the path of the discoverer. First he conjectures, then thinks, and finally tests. And the chief use of the laboratory method is that it enables him to follow this course. When it has degenerated into mere cutting and slicing, and drawing, it has lost its chief value.

But have we not been faithfully warned that the imagination has no place in science? "The more imagination," we are told, "the less reality." We expect of the scientist sober thought, not brilliantly presented guesses. Such views have always found able defenders and should be treated with respect. Hypotheses spring up like mushrooms, and last about as long. The imaginative student is set to study a starch-grain under the microscope, and he makes out of the starch-grain almost anything of which he can find a picture in his text-book. At the barest suggestion from teacher or companion he cries with Polonius: "By the Mass, and 'tis like a camel, indeed;" or: "It is backed like a weasel," and finally it becomes "very like a whale." "All this," you say, "comes from using the imagination."

We must start with guesses, conjectures, hypotheses; though we need not publish them before we have tested them. Without imagination you can have no Darwins, Huxleys, or Tyndalls; no palæontology or geology. When the student calls the starch-grain an amœba, we do not tell him beware of imagination; we bid him look again and draw what he sees. What the scientist needs is not less imagination but more careful and accurate observation, more patient reasoning, more rigid tests of his hypotheses.

But the successful scientist will always exercise his own imagination and that of his pupils. He will not allow "this valuable gift of nature to be repressed by a bookish and wordy education." He will encourage no day-dreaming fancy. He will demand that the pictures of the imagination shall be rigidly tested to see that they correspond to some objective reality. But within these limits and with these restrictions, the student of science will cultivate his imagination as faithfully as the stu-

dent of art. And he will train and control it with a far more scrupulous fidelity.

The subject was further discussed in an informal manner by President Timothy Dwight, of Yale University.

At the close of the discussion, invitations were extended to the members of the association and their guests to visit Mt. Holyoke College at South Hadley during their stay in the vicinity of Springfield, and also to visit the Art Museum of Springfield.

The association then adjourned until evening.

FRIDAY EVENING

The association reassembled at 7:45 and listened with great interest to Professor William M. Sloane, of Columbia University, upon the subject:

HOW TO BRING OUT THE ETHICAL VALUE OF HISTORY

THE ethical value of history! Argument by title is a common form of fallacy and this apparently simple phrase contains an admission which would suffice to call forth the vigorous remonstrances of many thinkers. Some who have but recently passed away and some who are still living, a numerous band of ardent investigators, deny or have denied that the cosmic process is ethical, that there is any other value in the study of history than the discovery of truth, which is sufficient unto itself and must not be profaned by relegating it to a place in a chain of causation. Yet the trend of general thought is, for the moment at least, toward a different philosophic system, a system which makes this topic of ours important and even vital. By one of the inexplicable but frequent antinomies of the human mind there is to be observed a remarkable movement of that liberal thought which rejects the supernatural, to accept a well-developed form of Theism as the basis of belief and of conduct. The rigidity of the cosmic process is denied. Novelty, progress, the ideal are emphasized. The laws of nature are regarded as fixed

habits not as rigid rules. This world is one of mingled permanence and novelty. All conservatives and most liberals are therefore in this remarkable conjuncture agreed that there is an ethical value in history and that it should be set forth with the greatest possible vividness in the teaching and writing of history. Even the most radical admit the sociability of men as a factor in the problem; the course as well as the goal (to use Jean Paul's expression) makes us happy.

Making, therefore, all the admissions necessary to bring us to our theme, dismissing with the contempt which it deserves the cry of "History for history's sake," enforcing the fact that there is an ethical value in history, let us, if possible, sweep away certain conceptions which give rise to countless misunderstandings. Of these the most flimsy, but for all that the most vicious and annoying, is that we study history as an accomplishment merely and for the sake of acquiring information. To have at command great masses of historical facts and to display them as a mere accomplishment is nowadays to be simply a nuisance; the time is gone, and let us hope forever, when knowledge was for the masses an end to itself and when so-called education was a luxury to be displayed like ruffles and laces for its own beauty and for the despair of those who were not fortunate enough to possess it. The dilettante in history should become as much of a fossil as the dinosaur.

Another of the troublesome conceits which crop up on every side and retard us in the task we have undertaken is the notion that history is nothing but a narrative of connected facts, and that the study of history consists in becoming familiar with such a narrative or a succession of them. In this sense history is literature and has precisely the value which is given to it by the author of the book and no more; in narrative history we must have our eye, in other words, not on the subject but on the teacher. It is his authority and not the authority of the investigation which lies behind any precept which may emerge as a rule of conduct. Extended treatises have been written to show how in the terse form of the old English proverb, "Nothing

lies like facts except figures;" we all know that there is no form of diplomacy so deceptive as that of Bismarck which consisted in telling the truth with the air of prevarication, and no form of falsehood is so elusive as a half truth or a fact taken from out of its connection. There can be no history as there can be no science of any kind without imagination, but we must carefully distinguish between learning and literature, the former being as far as possible impersonal and rational, the latter being to the utmost personal and imaginative. Every writer and every investigator has an intellectual kit of tools before he approaches his work; there is no absolute impartiality, we enter the world with a set of inherited predispositions, we imbibe axioms and precepts from our mother's milk, we set out on life's path with a pack of intentions, and we are likely to find by the wayside what we are looking for. The narrative or literary historian begins with a thesis and ends with the interpretation which he had by him at the beginning. If there be any analogy to his procedure it is to be found in the persistent interpretation by pious but immoral men of what they are pleased to call "Special providences." On the whole, the ardent and imaginative pleader is the historian who will be the most widely read, and who will perhaps do the most good, provided readers be forewarned as to what the intellectual exercise, in which they are or ought to be engaged, really is, viz., an exercise of critical examination and not of scientific instruction. In this case they cannot fail, instinctively, to apply the law of evidence expressed in the classical admonition to hear the other side.

Another annoying and almost universal preconception is the notion that because true history is scientific there is inferentially a science of history, as there is a science of geology; that, as we know the earth descriptively, chemically, and dynamically, and can make certain predictions concerning it, so we can know its denizens physically and spiritually, including man, and can make corresponding predictions concerning them. The wildest materialist no longer makes such a claim, but it was made during a period long enough to infect the intellectual classes, not with

conviction but with the vague notion that by indefatigable labor we might hope eventually to secure the data of a science of history, in the common sense of that word, and that, having transformed history, much as alchemy and astrology had been transformed, we were near the wished-for goal of an exact science of history. How well some of us recall the overweening confidence of the prophets of science one short generation ago, that, in the words of Berthelot, all mystery was at an end! With what interest have we watched the great philosophic historians of that school, work their painful way through the labyrinths of complicated epochs, noted their progress, and marked their disappointed mien as they announced the meager conclusions at which they arrived. There are no more pathetic figures before the public today than the apostles of physical science in the world of letters; as physical historians Spencer and Taine stand in lonely grandeur, without a following; Zola and Bourget no longer arouse any emotion but that of pity; Mrs. Cross' efforts and pitiable failure to observe and generalize on the physical basis, like those of her imitators, are felt to be picturesque but not authoritative. Instances might be multiplied, but there is no need; we all know that we are at the end of a phase. The commanding minds of today are not the exact scientists, as were those of yesterday; the commanding liberalism is not materialism but idealism; the seeker after the invisible, the spiritual, has the right of way; Tennyson calls *de profundis* to God, in the clarion, tender cry of the classic, Browning in the stammering tongue of one who, conscious of the Almighty, can find no language wherewith to address him; it is quite as much the philosophic mysticism of Darwin and Spencer, of Mill and Carlyle, of Mrs. Cross and Mrs. Ward, as it is their would-be scientific demonstrations, which interest our generation. In like manner the late strictly scientific definition of history no longer goes; we do not believe that history is past politics and that alone, that its sole business is to establish and correlate facts in secondary chains of cause and effect with a view to securing a connected story of the political life of man. What we demand is a result

of investigation which shall take into account the spirit of the man and the spirit of the race, of the interaction of these upon each other, and of the physical elements of habitat, environment, and structure upon mind, with a due consideration of the reflex action of intellect, spirit, and belief upon all the course of human life. The later phases of the historical philosophy just passing, with much good have done some harm. By them the problem is rendered far more complex, even though it be far more complete and interesting. We have lost a narrow feeling of certitude; to be cock-sure is to repel confidence; but we have gained immensely in the interest and expansiveness of our task. History, being more comprehensive, is more scientific; being intellectual and spiritual it is farther from the limitations of physical science in the narrow sense.

The last of our false impressions to be removed is that which, in view of such considerations, rejects the preaching not only of the church, but even of the novelists like Kingsley, of the critics like Matthew Arnold, yes, of the art apostles like Ruskin, and demands its preaching and guidance from the historian. The universal human craving is for guidance, from the cradle to the death-bed it is felt by the individual, from the days of the cave dweller until the clock struck a few minutes since on the nearest steeple it has been true of man and men. Have it we will, whether we seek it in the reeking omens of bloody sacrifice or in what Hegel calls with pompous phrase the self-determination of the human will. We are all so made that we believe in revelation of some kind, more or less imperfect. There is an interesting identity in processes apparently separated by the whole universe. The savage connects himself with nature through his fetichism; the physical, or physicist, metaphysician constructs a materialistic theory of the universe and seeks to determine man's place in such a universe. There is a parallel identity in the obverse of this. The primitive man protests against the bondage and fear of pitiless natural law by celebrating flower and resurrection festivals; the investigator of humanity seeks for a revelation of some higher power in the study of man, in the

examination of books which purport to be a record of spirit working in man, and, in a forecast of man's destiny as an immortal being. These latter are they who seek guidance in history and look to the historian as their preacher. Discovering social and political problems of vast importance, they demand some solution from those whom they believe to be experts. Having settled in their minds the fixed idea that such solutions can be obtained, they pass easily to the error that they have been found and are available. Unfortunately there are charlatans and sciolists a plenty who are ready to take advantage of the credulous. Such results as there have hitherto been, and they are, alas! but few, are in the way of being philosophical, and not practical, matter for the poet rather than for the statesman and politician. How to secure concrete maxims and render them generally available in pulpit, library, and class room is well worth our earnest consideration.

History in the broad sense is all that has happened in the past, and specifically it is the record of the past. Beginning with the youth of mankind as the story of human society in its relations to natural and supernatural influences, it was of course mythical; then followed the epoch of annals and chronicles; then the days when historical story-tellers held men spellbound by the connected account of marvelous deeds and gratified their curiosity by descriptions of extraordinary experiences. But to the truthful, though gossipy narrators, like Herodotus, there soon succeeded the searching and critical Thucydides, who taught men how to discover facts, how to arrange them scientifically, and how to drag from them their deeper meaning. Thenceforward it has only been a question of dimensions, of subject, of manner, of extent, of relation to other disciplines of the human mind. The discovery by the teaching of evolutionary science, natural and psychological, that all mankind are of one blood has spread almost to universality the belief in the unity of history, and made us adopt the synchronism of facts as a focal idea in our procedure; this circumstance has in a thousand familiar ways revolutionized historical work both in teaching and in

writing, mainly however by the splendid development of the ancillary sciences of archæology, geography, philology, anthropology, and ethnography. Such has become the wealth of information and such the extent of the field that limitation of some sort was imperative and by common consent we have established arbitrary bounds within which we confine the stream, the great central stream, of history. Our one controlling thought is the oneness of the movement and it is only where this movement is affected that we concern ourselves with elements that condition but do not direct. The persons in this movement are civilized men, not prehistoric, or barbarian beings. These although in the outer semblance of men, are destitute of the nature which common consent characterizes as human, and which, since its origin, wherever and however that occurred, has been and will always remain substantially the same. This eminent fact again gives ground for expectation that definite ethical principles can be deduced from the study of history and not merely vague, illusory hopes. The record of civilization, whether written in signs on paper, clay, or stone, is long, ten thousand years, about; and while there are gaps, there are no chasms. Let the geologist and the ethnologist and the archæologist struggle with so-called quaternary or even tertiary man; let the patient investigations of savage, barbarous, and pre-historic human activity continue without ceasing; with all these we are not chiefly concerned, we have a definite field, let us cultivate it only to the landmarks and no farther.

Large as the field is, we freely admit that it is not large enough for the application of the same methods of research as are employed by those who have the universe of natural science within which to collect facts for their generalizations. The greatest logician of our age, John Stuart Mill, expounded this with care and only the superficial assume the contrary. With pure deduction we can have nothing to do, and the basis for induction is insufficient; we are compelled therefore in the historical method of reasoning to combine the two. First, we must generalize on a few well-tested facts and truths, then draw a ten-

tative conclusion; repeating this procedure as often as may be; we then have a series of tentative conclusions wherewith to employ the comparative method; finally, our conclusions must be tested by the principles of psychology, individual and collective. With a conception of this sort something can even now be done, although confessedly no science is more hopelessly chaotic at this moment than psychology with its warring camps of the old and new schools. If there were no other ethical principle to be derived from the study of history, that of patience would stand out, emphasized as nowhere else. In a leading metropolitan newspaper of recent date, a reviewer, presumably a careful and competent man, exclaimed with human but unscientific impatience: "Why does not the author of these ponderous tomes begin by telling us what history as he understands it really is?" In a sense the demand is fair. The outcome of a generation's work has been enormous; the unity of history, the field of investigation, the method; surely the general acceptance of these concepts is much, and while we may hope for a definition of universal validity only when time shall be no more and not till then, yet with these initial doctrines fairly settled and accepted, a partial definition and some results may be hoped for, perhaps in this, certainly in the coming generation.

It is a matter of vast importance that the worker should have a distinct and honest notion of himself. The hallucinations which we cherish about ourselves are instructive and immensely valuable. In our ideals we stand as investigators, dispassionate, impersonal, well trained, with a single eye to the truth. We advance with no guide and in no particular direction, we have nothing to carry except the accumulating stores of knowledge which start forth at our approach to be gathered without effort. Stroke by stroke we reap the harvest until we have a sheaf and this we leave to be garnered and proceed until another is added to our store, and so on indefinitely. These and the like in our ideals are the outlines of the scientific worker, ourselves or another. Is such dreaming merely absurd, we ask when we waken to the full reality of our prejudice, blindness, and slavery.

No, it is dangerous, if you will, in the assumptions of the vain glorious and in the credulity of the blind disciple. But not absurd; for the wisest it has an invaluable and never-to-be-forgotten importance. The existence of such an ideal argues that there is something in every man higher than himself; what is an ideal but a directive idea, the tendency of development, the type forming in the race? The strongest argument for the immortality of the soul is that which Kant drew from the soul's demand for the realization of its own ideal. Theism today rests perhaps its strongest proof for the existence of God on the universality of the idea. In the same way the ideal of an unprejudiced, unbiased, yet well-equipped, historical investigator is a sign in itself of advancement from prejudice and tradition through firmer faith and purer conduct to fuller capacity. But the warning is none the less clear that at this moment we are far enough from the ideal.

What then are the facts of our inherited nature which bear directly on our attempt to wrest and display a body of ethical teaching from the study of history? As a plain man, anxious to be honest with myself and others, it appears to me that the Anglo-Saxon both sides the sea sincerely believes everything good to be rooted and grounded in the past, that he clings with tenacity to every social habit and institution which does not prove directly and visibly harmful. He holds the firm conviction that the aim of society is to render more stable the unstable equilibrium of its structure, a structure formed only after centuries of thought, effort, and sacrifice. This stability, according to his concept, is secured by the variance of the individuals which compose the structure; against it every single person is pushing with more or less vigor according to his or her ability, and the resultant of the pushes secures the equilibrium. The liberal democrat thinks the equilibrium dependent upon the counterthrusts as they are exerted at any given moment, while the conservative holds that the equilibrium is dependent on maintaining the inherent strength of the central, inherited structure or organism; the former thinks the organic functions and

character of society infinitesimal, and thus indifferent; the latter considers them important and vital, not to be lightly disturbed but to be given ample time to perform their tasks. A cement of this social structure there must be, and the Anglo-Saxon has never doubted for an instant that the cement is property. Even now when inventions and manufactures have done their utmost to change the grouping of humanity, delocalizing countrysides, villages, cities, and even nationalities, and thus rendering humanity cosmopolitan, he has the ready retort to all who cavil at his fundamental position: Follow the counsel of perfection, sell all thou hast and give to the poor. In our creed this is to be the goal, the ideal; but, like all human ideals it must be reached gradually and without disturbance of the only process by which it can be reached, to wit, the perfectibility of man in an earthly and possible environment. To strive for the earthly paradise by the short cut of revolution is simply to undo the painful work of ages and begin again the heart-breaking task of experiment and of slow, almost imperceptible, gains.

The American well understands that there is pressing and instant need for rearranging the displaced and vastly increased population of the earth, and he is well aware of the continental European conception of how the problem is to be solved. But for himself he believes that instead of cherishing the collective type of universal humanity by compulsory uniformity, the individual should diverge from it as far as possible within the limits of order, in the expectation of preventing stagnation and stimulating advance and improvement. If the person goes too far in his career of attack, he will, of course, destroy himself and become the martyr who serves either as an inspiration or as a warning, as the case may be. The conservative fears the variation from the type, the radical exaggerates it, the true liberal cultivates it. The multi-millionaire of the industrial world is as much of a radical as the frothy anarchist of the barrooms in his deviation from the type; one abuses the means of self gratification afforded by the present structure of society about as much as the other, the true conservative is the moderately well-to-do,

saving, thrifty worker, who fears lest in changing legislation to thwart license and licentiousness he may unadvisably meddle with liberty of speech and exertion. We sometimes say despairingly that at bottom our conduct is based on pure expediency; if you do not like the conditions under which you were born, try the opposite and see what comes of it. What we want is comfort, money, home, education. We test even religion and church by the standard of utility. There was a time in Anglo-Saxon life when the most important and influential person in any and every society was emphatically the parson, as the word was then pronounced; if we ask why, we must confess that it was not entirely because it was an age of faith and the minister was the spiritual guide of the community, their shepherd in spiritual things; there was a further and probably stronger reason. The English parson and the Calvinistic minister were in the days of their power worldly wise; they taught and emphasized the lesson that piety was quite as important in the world that is as it would be for the world to come, they held their place because they were the counsellors of their flocks in all worldly affairs, the tutors of their people in worldly interest, the men holding themselves responsible for the good conduct and prosperity of the men and women about them. The parson of today suffers in general esteem, not because he is less learned than his predecessor, but because he does not illustrate in himself the practical, worldly results of his calling as the grave, thrifty, well-bred, well-dressed, shrewd, determined clergyman of sixty years since was wont to do. Our clergyman is too often a man from below without the power of self-assertion, too often a teacher of dogmas unrelated to life, a voice crying in the wilderness and not integral to the social life of his day. There is danger that the teacher of history and the historian may fall into like disesteem if they do not soon produce their contributions toward solving the troublesome problems of the day.

Dealing with a public composed of such practical, direct, pertinent individuals, science on the side of nature has thrown many a sop to Cerberus; on the human side it has contributed far more.

It has contrived and kept in a condition of evolution institutions for unifying and balancing the interests of millions and millions where once but thousands could dwell in fellowship; in politics, society, education above all, it has worked a revolution. Moreover, human science has assimilated the method of natural science. The student of life has become both a naturalist and a historian. As a naturalist he examines the habits, manners, tastes, beliefs, instincts of man, with the practical view of the breeder and trainer. As a historian he examines and investigates the antecedent and successive stages of development and association, thought, and conduct; discovering that permanence has been secured by slow processes, he becomes and remains an evolutionist. In other words, the historian of all nations is very largely, if not entirely, in accord with the plain man of Anglo-Saxon birth, as he was sketched a moment since. If the claim be true, then in the highest sense the moderate democrat of this day and this place is the most historic in his sense and instinct of any man now living. That very quality which at first blush seems to us a reproach, and which other nations throw in our teeth as a reproach, turns out to be a precious possession, and the basis for the truest historical insight.

The plain, historic, Anglo-Saxon man must, however, rid himself of two errors to which he is very prone: first, that the criterion of instruction in a democracy is utility; second, that when we reform instruction we reform education, or, in other words, that we can attain character by an exercise of the judgment. The true aim of education is to make an all-round man; not a minister or a professor, not an engineer or a lawyer, not a soldier, farmer, or merchant, but—a personality with the largest possible amount of moral force; in fact, a reservoir of such moral force as is attained by a clear conception of his place in humanity, present and past, in all the life already lived by all men and women. To illustrate the dangers of narrowness we have not far to go. Industrial development has brought back into activity one of the most pestilential social heresies which the world has ever known; an old refuted, worn-out, flimsy creed, that of

socialism, a doctrine into which Aristotle poured the destruction of his logic and flung the conflagration of his scorn, leaving it a torn, charred, fag-end on the rubbish heap of time. But the modern factory multiplied the factory hand, and with the appreciation of the factory hand as a voting force, under democratic institutions, arose a vision in the factory hand's brainstuff such as could only be woven from the shoddy rescued for temporary use from the world's rubbish heap.

The modern factory is the cradle of resurrected socialism. In it men work in common throughout a lifetime, each producing but one part of a whole under a common discipline. The ideal of such human beings must necessarily be communistic life, a life in which the workers are well and kindly treated under a system of profit-sharing and the enforcement of sanitary rules. In this Utopia there must be plenty of rest, cheap and abundant amusement, with books, schools, clothes, and food for the asking. Machine-made wealth and machine-made well-being for the few, were conclusive, practical arguments that well-being and wealth could be manufactured for the many if only the organization and the capital could be found. Both were at hand; the organization is the all-powerful state in which every man has his share or shares by means of his vote; the capital was the sentimental mysticism to which reference has been made, and which was easily enlisted in the cause of "humanity," as it was soon called. The flood of pity overwhelmed politics in the old-fashioned sense altogether and drowned opportunism of every form. Legislation was soon occupied in multiplying restraint on personal action, in supervising contracts, in extending state action, and lawmakers held unity with uniformity before their eyes as the goal of all their efforts. The importance of the mass in relation to the man was magnified out of all proportion. But now communistic mysticism has begun to lose its vogue. It has turned out that we are not all factory hands, the mystery of living remains quite as great as ever, in fact vagueness broods more than ever on the face of all things, and neither human nor natural science has been able to dispel it: the promised land seems no

nearer, in fact it is visibly receding, for every discipline is propounding new problems.

Are we then to swing back to the opposite extreme again, and regard nothing but expediency, utility, and seemliness in our questioning of the past? Far from us be such a fate as the indifference and hollow worldliness of the intellectual generation which was that of our grandfathers; quite as far as the transcendentalism and impracticability of those whose voices are either just vanishing or are heard only like the echoes of a passing call from disembodied spirits. With this determination, with a knowledge of our qualities and limitations, with the conviction that history is neither altogether an art nor altogether a science, but for the moment nothing else than an artistic and scientific discipline, with a view of the proportion between man and man, with definitions of the field, the method, and the object we may humbly and experimentally form an idea of what we are to expect from it in the way of ethical teaching and set out to find it with some expectation of success.

If our assumption be not entirely false, the ethical results of historical work, teaching, or writing, have already been suggested and need only to be stated. They are of three kinds: enlargement of the personal horizon by assimilating the experiences of the race; the relation of man to mankind and the possibilities of the future; the indications that there is something in the universe higher than man or nature. The most philosophical historians are all in substantial agreement about these points, and they may, perhaps, even be called platitudes. But all great thoughts are platitudes; the only originality is in the presentation of them, and for all thoughtful men in particular, the truest originality is in thinking over for themselves the great thoughts of all the ages. The assimilation of race experience is an ever growing familiarity with old ideas behind new faces; with not one, not the present and obvious phase of existence, but with all the phases which have so far exhibited themselves. It has been well said that every heresy is the distortion and exaggeration of some single truth; in like manner few

men are correct in their view of life, simply because they have seen but a single side of it; to know the transcendent beauty of the diamond we must not fix our eyes on one facet, but we must see them all as a whole, and then the deep clear light of the precious stone reveals itself, then and then only.

The positive good, is, alas! always to a degree offset by the negative evil and while familiarity with history is sure to reveal the good in human nature, yet it will more frequently expose and lay bare the evil, that quality which the theologians with rhetorical emphasis designate as total depravity. This is the reason why godless men in all ages have been led to preach the gospel of despair. Gibbon thought history little else than a register of crime, folly, and misfortune; Voltaire reiterated the words and both merely revamped an ancient heathen idea, which represented the affairs of the world as directed by a blind and crazed divinity. On the other hand the less literary but more learned, and scientific historians, have taken a view diametrically the opposite. Thucydides uttered an immortal phrase and Lord Bolingbroke restored it to its proper influence. History is philosophy teaching by example. This means, of course, that while we must carefully note and thoroughly appreciate how utterly bad men can be, yet we will perceive at the close of each series of facts with which we deal, that there is a gain, however small, and that when we come to compare all our tentative conclusions, there arises an infinite probability, undistinguishable from certitude, that all proceeds according to law, and that the law is a law of progress. The wider our experience, the fuller our knowledge, the more valuable are our judgments, and it is a stimulating and invigorating thought that the more learned historians have been the more hopeful, calm, and confident. They have thought it in the words of Pliny the younger, "a noble employment to rescue from oblivion those who deserve to be eternally remembered and by extending the reputation of others to advance at the same time our own." Warning and example, these are the dual ideas which constitute the earliest, easiest, and perhaps the most valuable ethical lesson to be derived from the study of his-

tory. There is not a high-minded man or woman, no matter how humble the opportunity, who cannot enforce this lesson.

Any pursuit concerned with ideal humanity and the near approaches to it, is so far ethical. History, however, does not investigate the nature and constitution of human character individually, at least only in so far as the person is identified with a historic movement, it is concerned with human character in the mass and with formulating the rules which in their observanc have led mankind toward the Eternal Right, and the breach of which has overthrown and destroyed great societies. Hence the apparent antinomy which is constantly arising between the pub lic and private duty of individual men. In fact this department of ethics is quite the most complex and difficult of all. That side of historical work which today is generally called research or the labor of erudition, has become fairly scientific, even in the sense of exact science; for every side of it we have a high sounding name, heuristics, diplomatics, epigraphics, palæograph ics, sphragistics, numismatics, heraldics, and what not; yet under the new régime we have been so busy with these preliminaries that the inverse deduction by which rules are to be secured has been sadly neglected. Rules of historical investigation we have in plenty, and they are excellent; but the rules derived from historical investigation are very few and doubtful. One majestic truth seems, however, to have emerged from the discussion of what are facts and how they are to be recorded; the fact namely, that whether we accept one view or another of history as a written record, there can be no disagreement as to the correspondence between the state of society and the history which is produced in it. There are four stages of Greek political evolution; to these correspond Herodotus with the epic interest of free hand, artistic pictures; Thucydides with his comprehensive brevity, critical exactness, and terse political reflections; Xenophon with his practical views and ethical qualities, and then at the close a decline to inartistic compilation for the gratification of curiosity, from which emerge Dionysius, Diodorus, Plutarch, and Polybius, the comparative, universal, and pragmatic investi-

gators of a dying civilization. Likewise Rome: Sallust, marked by a thoughtful brevity, Cæsar with his brilliant simplicity, Velleius Patercalus and his bold character sketches, Tacitus with his pregnant style, moral earnestness, and profound political wisdom; then the decline; Suetonius, Valerius Maximus, Aurelius Victor, Eutropius, Ammianus Marcellinus, and all the race of annalists, chroniclers, and compilers down through the Byzantines; their work sufficiently meritorious in some respects, but all of it nothing but an echo of their predecessors. In Italy there followed each other, Machiavelli, Guicciardini, Paolo Giovio, and Adriani. In France, too, the succession is easily traced: Froissart, Comines, Thou, d'Aubigny, etc.; the parallel will hold everywhere.

But a fact is not a truth without the interpretation which relates it to conduct. What does it mean that the quality of history corresponds so directly to the vigor of social life? Can it be explained by considering the historical evolution as purely mechanical? No, the historian is spiritually and individually conscious of something not himself, or in himself, which reacts on all his faculties, and makes him capable of mirroring the social process of which he is a part; no, his spirit responds to the call of other spirits, and it is the continuity of this interaction which constitutes the continuity of the historical evolution, never broken and revealing itself in direct correspondence with the mechanical and yet not fatalistic elements of the whole process. As the evolution proceeds the mechanism reveals the free spirit within; as it is retarded or turned on itself at the end of a phase, the spirit seems to withdraw from observation as if to gather strength for the next advance, and the historical expression of the historic process becomes a mechanical chronicle. But again the human spirit reacts on the flexible elements of progress, and again there is an advance to be recorded, with a recorder of suitable strength to perform the task. In the intermittent character of historical writing we actually see what otherwise remains a hypothesis, the struggle of the free and the mechanical elements, neither entirely bad, neither entirely good, and from it we learn with distinct revelation that short, concise, and simple

methods or the expression of them in law are not to be observed in the historical movement, because they do not exist. Uranus and Gaea beget the gods and they are swallowed up by Cronus; but he in turn brings forth others, among them Zeus, whose mother Rhea, preserves him from the maw of Cronus by guile, and Zeus in turn destroys the older race and sets the Olympians on their career. Thus far in their coarse imagery did the ancients go towards expressing their conception of the fact that there is not merely development in the universe but quite as certainly dissolution, that hope succeeds despair, but that despair again finds ground and sustenance in decay; what we claim to know is more, that regularity and mechanism disappear at intervals, that they are superseded by spiritual consciousness, and that in the decline of each dispensation there is the germ of a new power, not ourselves, but manifestly in the form of our race, which overcomes the reversal or check and, preserving the continuity of evolution, starts the historic process once more on its way. In this ethical conviction lies the doctrine of the ideal and the relation of man to his race. Mythology in the comparison of religions gives hints of the same truths, but the advance and the records of culture prove it. Human impulse runs down but there is an inexhaustible fountain of spiritual energy from which the race gains new force for the men of succeeding generations.

Coming now to the third class of ethical lessons to be enforced in the study of history, we must never forget that the very idea of progress in human affairs is a modern one and dates no further back than the seventeenth century. It was set forth by four men: Bodin, Bacon, Descartes, and Pascal. These were giants, and from that day to this no able thinker has dared to reject the proposition. With equal steps the notions of physical and human evolution have been steadily amplified and examined in the light of all new knowledge, and, as we have previously remarked, the interest of our time in the work of the physical evolutionists is mainly in the effort to determine its bearing on questions relating to collective human activity and to ethics. Here of course the one important question is the beginning of

mind. There is no explanation in physical evolution, and however much we may dwell on the perfect gradation within series which are known to us as fairly complete, yet we have not crossed the chasm between the organic and the inorganic series, nor have we traced the genesis of direct sensation. Clifford gives up the problem of origins. Clerk Maxwell posits an infinity of homogeneous molecules, and Spencer puts behind these an infinity of homogeneous first elements ; in other words all physical thinkers assume an initial arrangement containing all the potentiality of the rest. This assumption, they know, requires an explanation and they one and all seek it in metaphysics ; materialism, spiritualism, monism, idealism, all alike take on the evolutionary garb and speak the evolutionary tongue without an effort. Hence for our purpose it is not necessary to distinguish among the metaphysical schools and their adherents. These all take one of two views ; some find that the assent to our close relation with the animal world gives us a backward look, makes us rigid determinists, and forbids the idea that there can be any advance in morality beyond that of the absolute first cause which has been from all eternity ; others argue that past kinship with the animals places us of necessity in the most complete opposition to them in the future, and that the aim of morality must be to develop all that distinguishes man from the brute. Man as the last must be the highest product of evolution, hence all things have existed and do exist for his sake, and, in Arnold's words, he is the cynosure of things terrestrial. Here enters the optimist, who sees in the idea of adaptation to environment and the survival of the fittest the guarantee of the millennium; the best of men in the best of all possible worlds.

Whether then we accept, as religious men in the conservative and Christian sense, the doctrine of the moral order of the universe, or whether we struggle to remove the first cause which we call the creator further and further from our ken by interposing evolutionary processes of indefinite duration (and it makes no difference apparently to which sect of evolutionists we belong), one great ethical lesson shines forth from our study of history,

that progress in some meaning of that much vexed word is a certainty. These are severe abstractions and most of us have little interest in them except as we find some guidance in our more concrete work. But this very direction is what we are seeking. If what we find is corroborative, then we have made a great gain in the comfortable assurance that we are on the right road and have only to advance. Interpretation will come in time, provided only we follow our method, in fact it comes with every step we take. Many are not ready for the evolutionary optimism, but there are few indeed who do not grasp the meliorism or betterment of all human conditions as they observe, note, compare and record or teach the facts of the past and the present. Nor are we unprepared for the waves of pessimism which recur in the history of human thought and are created by the reversals in human experience. In the just consideration of our discipline as a whole we expect the back-flow and the return, but we also know that these are parts of the upward, onward movement, and that in them the primordial influence is preparing the more evident and noticeable advance which is apprehended with ease. The great doctrine of the conservation of energy is just as applicable in history as in physics, and it convinces us of the immanence of the power, not ourselves and higher than ourselves, either individually or collectively, which is continually making for righteousness (to use Arnold's phrase once more).

This is clearly a moral force and an ethical principle of the highest value, no matter whence it is derived. No study can be of the first importance which lacks elasticity and poignancy. These are the essentials of the interest which leads the mind onward and upward; the imagination, the judgment, the heart, and more than all the sense of righteousness must all have play, and this is secured in the study of history along the lines we have been indicating as in no other discipline to which the attention of old and young can be directed. Some art critics say, and there is no longer much effort to gainsay them, that no picture has value unless it expresses a thought; others go further, and many refuse to accompany them, in declaring that the best

pictures must have a moral purpose. But in history there can be no cavilling with the two propositions collectively; the work must be above all else interesting and in all that concerns man interest is secured by thought, minute or comprehensive, and by aim or ethical quality. The thought and the aim both can be obscured and lost if technique or accomplishment be made the first object, if a personal estimate be made the important note in the pursuit, if more exactness of precept and axiom be expected than ought to be demanded; in other and shorter phrase, if we try to turn history into art or literature or science. But on the other hand, if we use it to broaden our knowledge of men and ourselves, if we limit our field and follow a correct method in discovering human types and their possibilities so as to prevent all empiricism in politics, and finally if we recognize that there is more in the movement than man puts into it, a law operating not blindly and ruthlessly but when largely considered beneficently and with an immortal and spiritual element revealing itself, then we shall exhibit the ethical principles which inhere in the highest and most intensely interesting of all the studies of the schools. There is possibly no such educational force for the individual as the result reached by the lonely struggle with a temptation or a course of known transgression; why should there be less value in the effort to discern the errors, follies, and mad blindness of the race and in discerning them, to find the right way to follow that we may leave them far behind. The task is onerous and the way is long; there is little immediate encouragement; self-restraint and compulsion are imperative; but so they are in any occupation that is worth while.

At the close of this address the audience repaired to the café of the high school, where refreshments had been provided, and passed another hour in enjoyable reunion and social converse. The tables were served by a group of young people from the senior class of the school. The Committee of Arrangements for this occasion were Dr. Fred. W. Atkinson, Mr. William Orr, Jr., Mr. Charles F. Warner, and Miss Alice M. Wing.

SATURDAY MORNING

The association reassembled at 9:30 for a business meeting.

The delegates to the Conference on Uniform Entrance Examinations in English presented a report through Dr. Frank A. Hill. The report was accepted as a statement of progress and the committee was continued.

CONFERENCE ON UNIFORM ENTRANCE REQUIREMENTS IN ENGLISH

The Conference met in Philadelphia on Wednesday, December 29, 1897. There were present as delegates: from the Commission of Colleges in New England on Admission Examinations, Professors C. T. Winchester, Albert S. Cook, and L. B. R. Briggs; from the Association of Colleges and Preparatory Schools of the Middle States and Maryland, Professors Francis H. Stoddard and G. R. Carpenter, and Principal Wilson Farrand; from the New England Association of Colleges and Preparatory Schools, Dr. Frank A. Hill, Professor Mary A. Jordan, and Mr. H. G. Buehler; from the North Central Association of Teachers of English, Professor Fred N. Scott and Principal C. N. French; and from the Association of Colleges and Preparatory Schools of the Southern States, Professor J, B. Henneman.

This being an adjourned meeting of the Conference, Professor Stoddard was retained as chairman, and Professor Cook as secretary. A report having been presented by the committee appointed to consider the advisability of issuing a more detailed statement of the requirements, it was, after discussion,

Voted, that the Conference recommends:

1. That English be studied throughout the primary and secondary school courses, and, when possible, for at least three periods a week during the four years of the high-school course.

2. That the prescribed books be regarded as a basis for such wider courses of English study as the schools may arrange for themselves.

3. That, where careful instruction in idiomatic English translation is not given, supplementary work to secure an equivalent training in diction and in sentence-structure be offered throughout the high-school course.

4. That a certain amount of outside reading, chiefly of poetry, fiction biography, and history, be encouraged throughout the entire school course.

5. That definite instruction be given in the choice of words, in the structure of sentences and of paragraphs, and in the simple forms of narration description, exposition, and argument. Such instruction should begin early in the high-school course.

6. That systematic training in speaking and writing English be given throughout the entire school course. That, in the high school, subjects for

compositions be taken, partly from the prescribed books, and partly from the student's own thought and experience.

7. That each of the books prescribed for study be taught with reference to
   a. The language, including the meaning of the words and sentences the important qualities of style, and the important allusions.
   b. The plan of the work, *i. e.*, its structure and method.
   c. The place of the work in literary history, the circumstances of its production, and the life of its author.

That all details be studied, not as ends in themselves, but as means to a comprehension of the whole.

A report having been presented by the committee appointed to prepare a list of books for voluntary reading in the schools, it was accepted as a report of progress, and the committee was continued.

It was voted as the sense of the Conference that, in adjourning, it be to meet again in the spring of 1899, and that if, in the meantime, occasion should arise for a special meeting, the chairman and secretary be authorized to call such meeting.

The secretary was instructed to express the thanks of the Conference to the authorities of the University of Pennsylvania and of Houston Hall for their gracious hospitality.

The Conference thereupon adjourned.

ALBERT S. COOK, *Secretary*

At the close of the business session a recess of short duration was taken. Whereupon the Chair introduced as the speaker Hon. Frank A. Hill, secretary of the Massachusetts Board of Education, whose subject was

HOW FAR THE PUBLIC HIGH SCHOOL IS A JUST CHARGE UPON THE PUBLIC TREASURY

I have been asked to answer the question, "How far is the public high school a just charge upon the public treasury?" I shall have to limit my answer to Massachusetts, although, in the nature of the case, whatever answer may satisfy Massachusetts is likely to serve, in some measure, other states as well.

Although the towns do not return their high-school expenditures in a separate statement, a fairly trustworthy approximation to the aggregate of such expenditures is attainable in several ways. If we bring together the expenditures for all school purposes, including new buildings and old, as reported in the

latest school returns, then out of an average total tax for the state of $15.23 on a thousand dollars, we shall find that the amount expended for schools was $4.72, of which amount 91 cents was for high schools; or, if we exclude expenditures on buildings, which are subject to wide fluctuations in their annual aggregates as well as to great unevenness of division between high school and lower school purposes, and deal only with current expenses, we shall find that the amount expended for schools was $2.95 on a thousand, of which 58 cents was for high schools. In other words, a little less than one fifth of the money raised for public schools in Massachusetts is expended upon the high schools. If the thirteen grades of pupils in our public schools had the same number of pupils in each, and if the school money were equally divided among all the grades, the four high-school grades would be entitled to four thirteenths of this money, or a little less than one third. As a matter of fact they receive, as has just been said, a little less than one fifth of it. This is because the number of pupils falls off from the lower grades to the higher, so that, notwithstanding the greater cost of education in the high school, the four high-school grades require much less money than any four grades below.

Now how far is this high-school tax a just charge upon the public treasury? The form of the question seems to suggest that it is just for the public to contribute something towards the support of the high school, but that it is an open question precisely how large that contribution shall be. The spirit of the question, however, seems to require a consideration of the reasons why the high school should be treated as an essential part of the public-school system and dealt with accordingly. Though these reasons are old, it is well to review them from time to time see whether they are sound or not.

I will not discuss the justice of making education in general a charge upon the public treasury. For two centuries and a half Massachusetts has clung most tenaciously to two fundamental thoughts about this matter. One is that every child — the humblest as well as the proudest — is entitled to a fair edu-

cation. Nay, he is not simply entitled to it, but the state must see that he has it. And the other is that the cost of this education is a legitimate public charge. Under stress of poverty or war Massachusetts has wavered at times in application of these principles, but never in loyalty to their essence. They are deeply intrenched in the universal conviction; they have found splendid expression in the supreme law; they are woven as unbroken strands into the substance of her history. Indeed, it is idle to make a show of defending a citadel that is a Gibraltar in itself and that no enemy of consequence now attacks.

When we leave education in general and think of secondary education in particular, we shall have to say that, so far as legal or technical justice is concerned, the high-school tax as well as the general school tax is a just charge upon the public treasury. That is to say, there has never been a time since 1647 when the laws of Massachusetts did not require certain towns to maintain at public expense grammar schools, *i. e.*, college preparatory schools, or their modern equivalents or successors popularly known as high schools. It has not been simply the legal right of these towns to tax themselves for the support of secondary schools, but it has been their legal duty to do so; and towns were not rarely "presented," as the old records run, and fined for failure to discharge this duty.

And when Massachusetts became a state the people took pains to clinch this policy of colonial and provincial times by putting into the Constitution these words: "It shall be the duty of legislatures and magistrates, in all future periods of this commonwealth, to cherish the interests of literature and the sciences, and all seminaries of them; especially the university at Cambridge, public schools and grammar schools in the towns." In other words, the ancient and historic grammar schools that taught Latin, Greek and mathematics, with such minor variations in the curriculum as the people saw fit to make, and that were supported at public expense, were specifically mentioned by the people in that "solemn and mutual agreement" as schools which legislatures are constitutionally bound to cherish. In

response to this duty, imposed upon them by the supreme law, our legislatures have again and again made requirements relating to grammar or high schools, while the towns, within the realm of local control, have, in numerous instances, gone far beyond the letter of such state requirements.

And when now and then conservative, skeptical or intractable persons have questioned the liberal action of the towns toward high schools, and have applied to the courts to restrain them in such action, the highest judical authority has invariably stood for the larger, the more generous interpretation of the high-school policy of the state. So that the justice of the high-school tax, if we consider simply such questions of legality as are settled by the Constitution, the laws and the decisions of the courts, rests on the solidest of rock.

To be sure, we now and then hear it said that the merest elements of an education will do for the toiling millions. Why should humble John Doe go to the high school? It is enough that he can read and write. What more does he need for plying the hoe or pushing the plane? To fill his horizon with tantalizing mirage effects, to fire his plebeian soul with vain longings, to sow discontent in his simple life, to train him to impatience under his natural leaders — in short, to school him above his station — this is bad both for John and for the community he should serve. Training the masses beyond their station! It is high time that under a popular government like ours the use of this word "masses" in any sense that excludes the user from the masses of which he speaks or that prompts him to say "they" and not "we" should cease. Who are these superior beings that presume to sit thus in judgment upon their fellows, to assign them to classes, according to their high pleasure, to set for them metes and bounds beyond which they shall not go? By what right, under our form of government, does any human being dare to say that I must grovel while you may aspire, that the primary school must suffice for my children while the university is for yours, that I must serve while you must rule? A believer in an aristocracy, a monarchy, the

divine right of kings may, perhaps, consistently venture to dispose of you and me, of yours and mine, in this summary way, but not a believer in a democracy, a republic, the divine right of the people. Indeed, article six in the Massachusetts declaration of rights records the deliberate and carefully expressed conviction of the people that "the idea of a man born a magistrate, lawgiver or judge is absurd and unnatural."

And so freedom of choice, when the question of what one's life work shall be comes up, is a basic thing in government by the people. Upon the wisdom of this choice turns the welfare of each unit in the state and therefore of the state itself. So vital is the connection between the individual's choice and the state's integrity, so essential to wisdom of choice is one's awakening to his own capacity and one's vision of the prizes that are possible to such awakening, that no state can afford to suffer its children or any portion of them to grow up without this revelation of themselves to themselves and without this stimulus from the splendid visions of a larger usefulness and a finer happiness.

It is, indeed, true that in spite of the state's effort through its public schools, to promote freedom and wisdom of choice, some people continue to make egregious blunders in their life plans. John Doe, for instance, aspires to teach when he had better break stones. "All wrong," we say, as we think of John's suffering pupils. But when we take a larger view, we begin to discriminate. If John Doe has blundered, we have sinned. John Doe did the best he could with his freedom in choosing a business. We have not done the best we could with our freedom in choosing a teacher. It is essential that John Doe shall exercise freedom of choice. It is not essential that the public shall endorse that choice. If it is important that John Doe shall modify or change his choice, it is essential that the public shall not be too indulgent or gullible in the presence of his faith in the wisdom of that choice. So let John Doe choose as he pleases; let him choose amiss, if his judgment is at fault and his friends cannot dissuade him, and let his blunders bring him to

grief that he may blunder the less thereafter. All the same, the chance John has is stimulating, developing. He is probably better off for trying to do something with it in spite of his misjudged use of it. I am not sure but that his failure in the larger endeavor leaves him more of a man than success in the smaller endeavor; I limit this hazardous thought, of course, to the realm of honest endeavor. "A sadder and wiser man," we sometimes say of John Doe when his misfit career is suddenly checked. If his wisdom lifts him out of his sadness and sets him in his true orbit, his experience certainly leaves him more of a man than before. At any rate, it leaves him as a lesson, a caution, a monument, for the guidance of other struggling souls—a kind of left-handed service to which the renderer cannot, indeed, point with pride, but by which the struggling souls referred to may fairly profit.

And so the total result of the process when people in general try to make something of the opportunities which are theirs under a wise government of their own is an uplift of the state through the enlargement and stimulus of its members, and an uplift of its members through the enlargement and stimulus of the state. It is the essence of democracy—this freedom of intelligent initiative and push by the individual along the lines of his taste or capacity, a freedom that permits him to rise from the lower plane to the higher, if he can and will. So good a thing is such freedom for the individual and, therefore, for the state, that the public should spare no pains to keep the avenues of ascent open. If free public education of a high order keeps these avenues open—and with all its imperfections it seems the wisest scheme for this purpose that human ingenuity has yet succeeded in devising—that settles the wisdom of having it.

Now it is precisely here, in loyalty to this ideal of free, open, attractive avenues by which the humblest child, if capable, may ascend to better things, that Massachusetts stands today; and I need rather to apologize for taking your time to hint at the reasons why she has taken this stand than to show any solicitude as to the validity of those reasons.

If, however, the justice of the high-school tax in its constitutional, legal and judicial aspects is beyond question, it is still legitimate to inquire whether the public is receiving what it ought from its high-school expenditure, or whether the high school is receiving what it ought from public taxation. Even if it should appear that high-school results are too meager for the money that is paid for them or that the money paid for them is too meager to make the results reputable, it would simply follow, in the one case, that the money available for the high school ought to be expended to better purpose, and, in the other, that there ought to be more money available for the high school. In neither case would it be proper to call the high-school tax unjust any more than it would be proper to call a highway or any other customary municipal tax unjust because it is too small or too large, or because it is carelessly or corruptly used. We may affirm lack of judgment in such cases, which is an unintended injustice to the taxpayer, or even lack of honesty, which is an intended injustice to him, but such injustice is an avoidable incident in raising or expending the money, not a defect inherent in the nature and purpose of the tax itself.

The relation of any tax to the people's ability to pay it, under our form of government, is dependent on the people's willingness to pay it; and this willingness, in its turn, is dependent on the people's intelligent appreciation of the benefits the tax is supposed to bring. The tax should not be so heavy as to check production, to devour income, to extinguish ambition, in short, to kill the goose that lays the golden egg; but what its basis shall be, just what percentage of this basis shall constitute the tax, how the tax shall be distributed among the various purposes it should serve, how each portion of it shall be expended—these, with scores of allied matters, are always likely to be open questions. In their nature they do not admit of exact, complete and final answers. It is not what people casually say that must be taken as their true answers to these questions but what they directly or through their representatives actually vote for. When the legislature in 1824 voted to exempt

nearly every town in the state from maintaining a high school, this meant that, in the popular judgment of that time, the high school was an institution of so great expense and so limited service that only the largest and wealthiest towns ought to be required to maintain it. When the legislature in 1891 ordered that every town should be required to provide its properly qualified children with free high-school tuition, this meant that, in the popular judgment of that time, high-school education was of so great and general value that, notwithstanding its expense, no child ought to be denied free access to it.

In short, our people are doing far more for education today than in 1824, and yet they are doing it more easily. The voice of the grumbler, I suppose, will never cease, but it is less often heard today than then. Here and there, indeed, we see a town that is pitifully burdened, paying double or quadruple the school tax of its wealthier neighbors and yet powerless to command the schooling it ought to have. Such unevenness, whether of burdens or of results, is regrettable ; the state does something to reduce it and should do more. Still the inequalities are not what they once were under the vicious district school system. It may be safely said that, whatever defects of taxation need to be remedied, the people as a whole are not excessively taxed — certainly not to the verge of rebellion, as in Cuba or Italy, or of confiscation, as in parts of Turkey; for when the people tax themselves, they are not likely to do it with suicidal intent, even if once in a while they do it with suicidal result. From the European point of view we all live in a kind of taxpayers' paradise, although, from our point of view, we are inclined to restrict his paradise to such towns as Milton, Nahant, and Manchester-by-the-Sea.

Leaving these general thoughts, let me say that we may find ample moral justification of the high-school tax not only in what the high school, at its best, is theoretically fitted to do for the youth of the state, but also in what the high school, with all its faults, is actually doing for them. Possibly, if I limit myself to the blessings the ideal high school is likely to confer upon the

public, I shall be open to the charge of trying to justify a public tax by what might be, if things were different, than by what is, things being as they are. It is better, therefore, to take our high-school facts just as they are, the bright, the dark, and the neutral, and to inquire if they justify the present tax. If they do, then they may be worth improving, even if it takes a little more money to do it. What are some of these facts?

One well-recognized and valuable fact is this, that the high school exerts a powerful stimulus for good upon the schools below. It holds up before the young ideals of higher and broader scholarship; it is the gateway to otherwise inaccessible realms beyond; it appeals to the ambition of the young; it appeals to this ambition at a critical time, when it is important that inferior ambitions shall be forestalled; it is a golden strand in that interest which holds the young up to scholarly endeavor. It fits in with the thought that noble inspiration comes from above, not from below, that normal children respond better, not when they are pushed from beneath, but when they are drawn from on high. The longing for higher things thus aroused, children do better work in the lower schools; they are more readily guided; they hold to a definite course more steadily. Indeed, it is as true of the mind as of any ship that sails the seas that it must have momentum to obey its helm. If this ambition to attend the high school is, in some measure, imitative —a mere spirit to do as others do—it is, in a larger measure, a spirit to study for study's sake or for the rewards that study brings. It is not surprising, therefore, that school committees, with scarcely an exception, should bear witness to the bracing influence of a good high school upon the grades below, experience thus confirming what theory would lead one to expect.

Again, high-school work is becoming more and more a natural and desirable, if not a necessary, continuation of the work below. The exclusion of rich subjects from the lower grades because they are assigned to the high school leads people to think of such themes as belonging to a less useful, a more luxurious education. When they are not tasted below there is

little longing for them above. And so there comes to be, at the gateway of the high school, a seductive and plausible halting place in the schooling of many a child. Now such a break is neither a logical nor a desirable one. Even when the attempt is made to promote unity, and so reduce the break in question, by putting nature study into the lower grades to go with the sciences of the upper, some are inclined to restrict the work below to the observation of isolated facts while extending the work above to the classification of such facts; in short, to view the work below as wholly preliminary to scientific study and apart from it, while regarding the work above as being for the first time truly scientific. "Here is the high school," they seem to reason, with its special name, its special home, its special courses of study, its special corps of teachers, and its special scale of expenditure. What justification is there for all this in an educational philosophy?" So, for one answer to the query, science is cut in two, as it were, its unorganized material summarily assigned to the lower grades and its organized to the higher. As if a well-taught normal child could observe detached, unorganized facts in the lower grades without a suspicion of those natural groupings and underlying principles that go to make up the science of such facts; or deal in the high school with the science of such facts without keeping on with observational study of the separate facts themselves. Some acquaintance with single objects must, indeed, precede recognition of what is common to them, but not in a sense to justify putting the processes that are involved years asunder in a scheme of instruction. It may answer, in studying the mind, to isolate its modes of working so as to gain a clearer view of each. It does not follow that there should be a corresponding isolation of these modes in our teaching.

The truer conception is that the mind is a unit. Its workings have the humblest and crudest beginnings. Its development is continuous — a development in rank as it were, as well as in file, the mind broadening out as well as forging ahead. And educative processes should have a corresponding unity. They should

reach the mind on all its sides—stirring its soul, quickening its thought, energizing its will. They should do this by getting at the springs of the child's activity. They should do this in the lowest schools as well as in the highest. With this view there is no natural stopping place in a scheme of study. Conditions outside of the scheme may end one's schooling anywhere, but the course itself is logically continuous, progressive, unbroken to the end. The high school is less and less regarded as a separate and optional, if not superfluous, institution. It is fitting with increasing closeness into the general system. The not infrequent transfer of ninth grade pupils to the high-school building and to high-school care improves this articulation. Pupils are assuming more and more that they are to keep on, as a matter of course, when they reach the high school. All this increases the usefulness of the high school and strengthens its hold on the public.

In the third place, our larger high schools are offering a wider range of choice to divergent tastes and capacities. Either there are parallel courses, any one of which the pupils may elect, or there is some carefully determined minimum which every pupil must take, with a variety of supplementary subjects from which he may choose. Such options are perfectly feasible for the large schools though burdensome to the small. They chime in with the more sensible views of education now held. There is the old knowledge theory that holds, by implication, the ideal of a curriculum of study complete and perfect in itself. There it is; each that—the mind will take care of itself if it is kept busy with a well thought out scheme of subjects to be studied. Then there is the old discipline theory that holds, by implication, the ideal of a typical mind, with its so-called faculties in such and such conditions to begin with while such and such conditions are desirable to end with. Work away at these faculties—it makes little difference in the long run what one studies, provided one's faculties are exploited.

Now neither of these ways is fatally defective. The mind will grow if you give it but little direct thought but keep it

intent on some subject to be mastered. It will grow if you give it all thought, regardless of the theme that is studied except so far as the theme engages this or that so-called faculty whose training is sought. The pressing need is that both the knowledge theory and the discipline theory shall be brought into one, so that the knowledge sought shall meet the demands of the mind and the mind to be trained shall be nourished by the knowledge it gains. Now the natural unifying principle is not to be found in some dead body of things to be learned, nor in some aggregate of mental powers to be coldly treated apart from the living being. It is to be found rather in the individual. This brings us to the development or genetic theory, under which the teacher starts with what the pupil actually is, not with what he theoretically ought to be, and then proceeds as the way opens. One should know things, indeed, and be subjected to wholesome discipline, but the knowledge and the discipline should hold some relation to one's fitness to receive them and so must be duly subordinated. In other words, the development idea involves a reaction from the extremes of class treatment; it carries with it increased respect for individual differences. And so the closer the high school gets to individual needs, the stronger the hold it gains upon the public esteem.

In no way can the individual be given a freer play, a finer field for self-exploitation, than through his motor activities. His sensations, emotions, ideas are embodiments of force; they have a dynamic character; they tend to discharge themselves in action. The energy thus set free may be broken up into a thousand aimless rills and so be wasted, or it may be gathered up, directed and made to do valuable work. The child's spontaneous activity springs from interest. If skillfully directed and utilized this activity augments the interest from which it springs. Imitative at first, it at length becomes inventive and even, in a sense, creative. It reacts helpfully upon the ideas that inspire it; it gives them definiteness, clearness, abiding character; it promotes executive power. Without it the schooled

are bookish and inert; with it the unschooled become the self-made men of the world. So fruitful a principle as this cannot be ignored if the whole child is to be properly schooled. The people are getting hold of it, and so, through their representatives, have ordered that all cities whose population exceeds twenty thousand each shall maintain manual training courses in connection with their high schools. The majority of these cities have conformed to the law — at least, so far as boys are concerned — and the rest are expected to follow. Thus a new and valuable means of training is coming within reach of the boys and, let us hope, of the girls as well, for a million and a half of the people. There can be no doubt that the more fully and judiciously the high school respects those methods and processes that engage the mind through the motor activities, the more closely it works to individual capacities and needs and the more completely it endears itself to those who have to foot the bills.

In the fourth place, the high school today is a much better avenue to things beyond than it has ever been in the past; moreover, this avenue will in time be broad enough to comprehend all the four years' courses of the high school. When this time comes, a very serious handicap of the high school will have been done away with. For 250 years the people have tried to fit youth for college in ways to please the college; it has been only for a generation or two that they have tried with equal seriousness to build up parallel general courses in the high school to please themselves. In the former task they have had the help of the colleges; in the latter, they have generally been denied that help. By a process of natural selection, college aspirants have averaged somewhat higher than their fellows in blood, ambition and scholarship. And so the college preparatory course has enjoyed a prestige which the general course has found it hard to gain. The one has been a royal avenue,— narrow, indeed, but leading straight to the college; the other a common road,— broad enough, but leading nowhere. The teacher's reputation has been more at stake in the former than

in the latter; in the one case he has worked with a lively sense of a judgment to come; in the other, with the comfortable feeling that there were generous margins as to the quantity and the quality of what he did and no accounting therefor to powers above. And so it is not strange that instruction in college preparatory work has been, on the whole, more sound, more searching, more successful, than that in general work. Nor is it strange, again, that when the teaching corps has not been large enough to do both kinds of work efficiently, the dregs of interest and energy have often fallen to the latter. All this, of course, has been a handicap to the general course, calculated, in itself, to separate it from the college by a formidable break. If now we add the fact that many subjects indispensable to the general course, like the sciences, for example, do not generally appear in the college admission requirements — at least for the degree of A.B.— the break is widened and deepened.

It is a great and needless burden that the small country high school, with but one or two teachers, cannot concentrate its energies upon some single course that shall contain those subjects which the vast majority of children must have and will not do without,— a course that shall answer alike for the college and the non-college pupils. Whatever the large high school may be able to do with parallel courses, the small high school cannot hope to manage them efficiently. It is a singular fact that, the college threshold once passed, the high-school subjects ignored in college admission examinations begin to appear as college requirements or electives,— an exceedingly late day for beginning with their elements. Indeed, the whole modern drift is towards beginning the attack on such elements in grades below the high school.

Now any condition of affairs that interposes a serious barrier between the vast majority of high-school pupils and the colleges, that is to say, between the people and the colleges, is bad both for the people and for the colleges. It is worth much to the people that they can send their children up to the very doors of the college whatever reputable high-school course

they may take and whether they enter college or not; it is also worth much to the colleges to rest squarely, all along the upper high-school line, upon the system of public-school education and, therefore, still more securely upon the respect and affection of the people. It is not simply a question of self-interest with the colleges; it is a question of their implied duty to make themselves felt for good throughout all the studies of the public-school system. They are insensible to their high trust to the extent to which they neglect that duty. Nor should they wait until the high schools have risen, without their influence, to a certain standard of efficiency in their general courses, but they should connect at once with them, throwing over to them temporary or provisional bridges until better ones can be built.

Now as a matter of fact the powerful influence of the colleges is moving in just this direction. If they are sufficiently generous in their recognition of the hitherto tabooed subjects, if they are not too exacting in their first demands for attainments in them, the promise is bright for a fair junction with the whole high-school system rather than with a section of it,—a union of forces sure to help the high schools, to say nothing of the colleges, and, therefore, likely to gratify the public that pays the high-school tax.

Here let me call attention to a new force that is making itself felt throughout the high-school system. I refer to the state normal schools. In 1896 candidates for admission to the schools were required to be high-school graduates or to have received an equivalent training, and, for the first time, to pass examinations in high-school subjects. Until quite recently, one could step from the grammar school directly into the normal school, omitting the high school altogether—a kind of short circuiting that was calculated neither to interest the high school in normal-school work nor to inspire it with respect for normal-school standards. All this was as bad for the high school as for the normal school. Since 1896, however, the normal schools have compelled the attention of the high schools. High-school

pupils, in larger numbers than ever before, have aspired to enter the normal school, and high-school masters have bestirred themselves as never before about the fitness of these pupils to do so. The new normal schools, in their admissions, have surpassed the most sanguine anticipations; the old have grown handsomely in spite of the new. The numbers admitted under the new policy were 389 in 1896, 630 in 1897, 584 in 1898—numbers, respectively, 7 per cent. less, 52 per cent. more, and 40 per cent. more than the average number of admissions for the last eight years of the old policy. Nor has this gain been secured by excessive indulgence; 63 candidates were rejected in 1897 and a larger number in 1898.

The normal school examinations bear directly upon the general courses pursued by the vast majority of pupils; they deal with themes which elementary teachers must know if they are to teach well. They are so shaped as to give options to candidates, and, therefore, to abound in valuable suggestions to the high schools; they call for power rather than for memory; and are so framed, when the colleges require the same subjects, as not to work at cross purposes with the college requirements, but in harmony with them. It is, for instance, unsound pedagogically as it is wasteful pecuniarily to teach English one way for the normal schools, a second way for the colleges, and a third way for those going to neither. A course in English suited to any one of these three cases should answer for the other two. To avoid encouraging a needless division of the English instruction in high schools, the normal schools adopt the entrance requirements in English of the colleges.

To show the extent to which higher institutions are interested in the high schools, let me say that in 1896 244 high schools—not quite the full number—sent 374 graduates to the normal schools; in 1897, 576—a gain of 54 per cent. In 1896 they sent 232 to high scientific schools; in 1897, 274—a gain of 18 per cent. In 1896 they sent 715 to the colleges; in 1897, 789—a gain of 10 per cent. The total for 1896 was 1321; for 1887, 1589—a gain of 20 per cent. Fully half of those who

pass through the high school to institutions above now take what is called the general course as opposed to the traditional college preparatory—the course of the great majority. All this tends to tone up and dignify the general course.

These figures bring out the striking importance of the high school as a factor in the preparation of the teachers of the commonwealth. It furnishes a large part of the academic training of the teachers who are destined to go out from the normal schools into the common schools of the state. The better the methods, the scholarship, the spirit of the high school, on the one hand, the better, on the other hand, will its graduates do in the higher institutions as students, and in the common schools again when they appear there as teachers. I hardly need to say that the people are seeing with varying degrees of clearness these intricate and far-reaching relations of the high school to teaching efficiency in general, and, therefore, are finding added reasons for maintaining and improving the instruction it gives.

It should be noted, in this connection, that the teachers of the high school have been largely those who have taken the traditional classical course of the high school, and, having graduated from college, have returned to the high school with their very natural classical bias. Undoubtedly, our high-school system, while in many ways uplifted by the intensive work and scholarly spirit of such teachers, has been unduly subordinated in the past to ideals which, whatever their excellence, have not been sufficiently pertinent to the demands of modern life. The group of foreign languages, for instance, still costs the public four dollars where English costs one dollar and the group of sciences, one dollar and fifty cents—a distribution of cost that impressively shows the classical domination. It would be very strange if the teaching in the elementary schools had not felt such over influence. Whatever else the elementary teacher may need, she needs a scholarly equipment in English, nature themes, history, music, and certain manual arts—an equipment to which the classically trained high-school teacher might easily fail to make adequate contribution. It is the general courses of the

high school—those planned for the non-college pupils—that best meet the needs of the elementary teacher. Fortunately, these courses are gaining in strength; good teachers for them are less rare than they once were. The notion that inferior teaching will answer for non-college pupils is an exploded one. If it takes a high order of qualifications to teach Latin well, it takes a higher order to teach English well. Arm-chair subjects make smaller demands on executive capacity than laboratory or outdoor subjects. Precise things of small range are more readily taught than vague things of indefinite range—algebraic equations, for example, than principles of art or of morals. English literature always loomed up before me as a vast, imperious and taxing theme to teach; when I wanted relief, I betook myself to college mathematics. In short, the general courses, on the whole, demand higher teaching power—at any rate, they present more perplexing problems—than the traditional college preparatory course. Of the 40,000 pupils in our high schools, 35,000 take the general courses—a great, stubborn fact that the high schools cannot get away from; a fact that must be met—is gradually being met—by better teaching—teaching that cannot but exert a wholesome influence in time on all the other teaching in our common schools. We cannot go far in contemplating the academic training of teachers, and, therefore, the sort of instruction they are likely to give the youth of the state, without seeing that the colleges, the high schools, the elementary schools, the teachers, and the public are so intricately bound together in common interests that none of them can afford to ignore the rest.

Not only are there ample reasons, in theory, why the public should value and support the high school, but there are ample evidences in fact that these reasons are mighty with the public. Consider for a moment the rise of the high school and its present remarkable hold on the loyalty of the people. Our educational history shows in the spirit of the people the Golden Era, the Dark Ages and the Renaissance—the Golden Age in the beginning, the Renaissance in our own time, and the Dark Ages

between. There was the action of the Colony of Massachusetts Bay in 1647, ordering that towns of 100 families should each maintain a grammar school, that is, a college-fitting school. It was Latin grammar and Greek, not English, that it taught. English grammar, as we understand it, was hardly known. It is a significant fact that the Golden Age of English literature was a grammarless age; the art flourished, the science slept. In 1677, Plymouth Colony said that towns of 50 families may, and towns of 70 families must, keep a grammar school. The next important legislation was in 1789. People had been living through a hard century. It was becoming more and more trying for the towns to comply with the law. Many of them had ceased to do so. Accordingly the General Court relaxed the grammar-school law of 1647. It ordered that thereafter towns not of 100 families but of 200 should maintain a grammar school. Under the old law, 230 towns were required to maintain such a school; under the new, more than 100 towns were released from this requirement.

But the general court of 1789 unwittingly gave another damaging blow to the grammar schools. It unfortunately established the school-district system. Under this system the school district, not the town, became the educational unit. Not unfrequently a town was broken up into twenty or thirty such districts. As a result district spirit rose; town spirit, already feeble, fell to greater depths, and with this fall went a further decline in the grammar school, which was a town and not a district institution. In other words, the several districts absorbed the educational energy of the people, what there was of it, and the town, as a town, was left educationally dry and barren. In such a desert no grammar school could thrive. It was this decline in town spirit, this dying out of the grammar school, that led to the springing up of academies and private schools on every hand. Towns might grow cold about high-grade schooling, but there were spirited families enough to insist, whatever the sacrifice, on such schooling for their children.

The year 1824 saw low-water mark in our educational his

tory. There were 172 towns that should have been supporting grammar schools under the law of 1789. Very few of them, however, were doing so. Accordingly, the legislature exempted all towns under 5000 inhabitants from maintaining them; that is to say, it exempted 165 of those 172 towns, all of them but 7. It was no longer only 100 families in the town, as in 1647, no longer 200 families, as in 1789, but practically 1000 families that created the obligation to maintain a grammar school. Thus the grammar school was nearly extinguished and its very name began to fade in oblivion. The altar fires of high ideals, however, were kept alive in the academies. It was the very success of these academies that, in a way, checked their growth and led, with some notable exceptions, to their reduced importance or their demise. It was largely because of them that the demand for free secondary instruction revived. It became a burning question everywhere, "Why should not the children of all the people enjoy advantages equal to those of the favored few?"

The reaction from the legislation of 1824 came quick and sharp. In 1826 the legislature ordered that towns of 4000 people should maintain a high school of the first grade; towns of 500 families, a high school of the second grade. Here was a partial return to the policy of the fathers, the beginning of educational repentance. The chief original difference between the two grades was that the first taught Latin and Greek, while the second did not; the first connected with the colleges in the traditional way, the second ignored the colleges and was ignored by them. And now for some years the policy of the state was singularly vacillating. There was a locking of horns between the progressive party and the conservative. The law of 1826 had been in force but a short time when the requirement of a second-grade high school in the case of towns with 500 families was repealed; in 1836 it was restored; in 1840 it was practically repealed again; and in 1848 it was restored again, this time to stay until another advance became possible. So we see that it took just twenty-two years to clinch the legislation of 1826.

For many years after 1826 the high-school outlook was far from encouraging. The law was explicit enough, but towns consulted their pleasure about obeying it. In 1838, for instance, out of forty-three towns required to maintain high schools, only fourteen were doing so. But the upward movement, long delayed, began at last. The missionaries of the movement were Horace Mann and his fellow-workers. In 1852 there were 64 high schools; in 1866, 156; in 1876, 216; in 1886, 229; in 1897, 262.

In 1891 the state took a step which placed it, for the first time, in advance of the policy of the founders. It ordered that free high-school tuition thereafter should be the legal right of every properly qualified child in the commonwealth. Every town, without exception, must furnish it either in its own high school or in that of a neighbor. Other states have gone beyond Massachusetts in making the college or university a part of the public-school system, but Massachusetts was the first state in the union, if not the first in the world, to make it compulsory on all its towns to provide free high-school instruction. Such compulsion bore with hardship, of course, on many small and feeble towns. Hence the policy in such cases of state reimbursement of high-school tuition payments.

In 1898 the legislature abolished the distinction between first-grade high schools and second, the people having previously abolished it in most of the towns. The aims of the high school were for the first time specifically stated—to give such instruction as may be required for general purposes of training and culture, as well as to prepare pupils for admission to the state normal schools, to high technical schools, and to the colleges. The length of the high-school curriculum was for the first time fixed; there must be at least one course four years long. And to ease somewhat the burden of this newly defined high school upon the small towns, it was made permissible for them to arrange that a portion of their high-school instruction may be given in the high school of another town. A town, for instance, may maintain a high school for a part of the course if it will

pay for the rest of the course elsewhere. This progressive legislation is, in itself, an expression of the people's conviction of the value of the high school. It has placed the high school in the best legal position it has ever held. The law can do but little more. It remains now to round out the high school to the full measure of its great opportunity; to see to it that its inner life responds in spirit and efficiency to the statutory ideal. Now, this is precisely what the educational forces of the state are trying to do. The gratifying fruits of their activity abound on every side. So far as these fruits are intellectual and spiritual, it is not easy to measure them. In their outward, material and visible aspects, however, they lend themselves happily enough to adequate presentation. A monograph of these outward aspects has been prepared to accompany this paper.

There is the numerical growth of the high school, for example. In round numbers, some 40,000 boys and girls attended the high schools of the state last year. This is double the number fifteen years ago. The gain is an astonishing one, as we shall see if we note that during these years the population of the state has increased but 40 per cent., while the number of pupils in the high school has increased 100 per cent. It would be strange if it should not appear that a part, at least, of this surprising growth was due to the growing efficiency of the high school. It would be equally strange if the surprising increase in the number of citizens immediately interested to have their children well taught did not have something to do with spurring the high school to still greater efficiency.

These 40,000 children in the high school constitute between 8 and 9 per cent. of the total enrollment of children in the public schools. The significance of an 8 per cent. enrollment in the high schools is totally and persistently misapprehended by large numbers. "Only 8 per cent. of the children in the high school," they say. "Then 92 per cent. never attend the high school." Instantly the conclusion comes from this blundering premise that the high school is for the few, the lower schools for the many; and, therefore, it becomes the public to expend less

money than it now does upon so inconsequential a part of the public-school system. Ought it not to be seen, with a moment's reflection, that in an ideal community, where every child, without exception, rises through all the grades and finally graduates from the high school, only a small percentage of the children can be enrolled in the high school at any one time? In this ideal community, if its population is assumed to be constant, the high-school enrollment can by no possibility exceed from 31 to 33 per cent., and yet every child enjoys, when his turn comes, high-school privileges, or, in other words, the percentage of enjoyment is 100. Under existing Massachusetts conditions the percentage of enjoyment is approximately three times that of enrollment—rather more, if anything, than less. In brief, 25 per cent. of the children of Massachusetts enjoy more or less of the privileges of the high school, and there are many towns where the percentage rises to 40, 50, or even 60. Now when the high-school attendance is seen in its real magnitude and true light, it is found to represent a much larger number of people and homes than many have suspected—a fact that has much to do with the hold of the high school upon the people, and the demands of the people on the high school.

In no way can we explain the great interest of the people in large, well-appointed, and beautiful buildings for their high schools unless we attribute it partly to the growing worth and promise of the high school and partly to the very large number of people who have gone through the high school themselves, or have sent their children there, or have children now in attendance there, or are going to have some there, or who prize the high school on general principles. Such buildings are going up all over the state, with approved systems of heating, ventilation, and sanitation, with libraries, laboratories, drawing rooms, gymnasiums, offices, and halls, the interior frequently decorated by the voluntary offerings of friends, the exterior as pleasing as architectural skill can make it, and the grounds not rarely spacious, and laid out in excellent taste. Private munificence has supplemented civic interest all over the state in furnishing

our towns with commodious and well-furnished libraries. Private munificence is now supplementing civic interest with increasing gifts of lands or of buildings or of equipment for the schools—often better buildings than the taxpayers would be justified, with all their enthusiasm, in erecting. These things are outward expressions only, it is true, but one cannot avoid the feeling that back of these expressions there is a growing worth in the schools that excite it as well as a growing conviction in the public mind that whatever that worth is, there is a greater measure of it that merits striving for.

Massachusetts, unlike many states of the Union, has no state college or university to crown her public-school system and to which graduates of her high schools may gain admission without payment of tuition. She has, indeed, taken a deep interest in collegiate education. One of the first acts of her general court was to set apart £400 for Harvard College. At sundry times she has aided higher institutions with money grants. In some of them she maintains free scholarships today. All this she has done, not simply in discharge of a constitutional duty, but because, as of old, it is her heart's desire to foster advanced learning in her midst. Stopping as she does with the high school in her public-school system, but encouraging, as she is bound to do and actually does, the higher education of youth in colleges and universities, Massachusetts is under bonds in this quarter not only to make her high-school system as efficient as possible, but in particular, to connect it as squarely and fully as possible with what there is beyond. The damming up of the system along six-sevenths or any other fraction of the upper high-school line she does not view with complacency. In no better way, under present conditions, can the state foster the higher than by fostering the lower. The money burden of the former rests chiefly on private interest and munificence; so much the more, then, should the money burden of the latter rest on the public.

We dwell much on the sentimental dividends of public education. There are dividends in plain hard cash or its equivalent

that appeal to people in quarters where sentiment is at a discount. Dr. Harris, the United States Commissioner of Education, not long ago called attention to a striking coincidence. Each child in Massachusetts, he said, receives on an average seven years of schooling; each child in the nation at large, only four years and three-tenths. The ratio is 70 to 43. The average daily wealth-producing power of each man, woman and child, Dr. Harris continued, was, during the year taken for the comparison, 73 cents in Massachusetts, while for the nation at large it was only 40 cents. The ratio is 73 to 40, the excess being 33 cents a day.

I am informed by Horace G. Wadlin, Chief of the Massachusetts Labor Bureau of Statistics, to whom I applied for a verification of Dr. Harris's statement, that, according to the latest obtainable figures, the net result of productive industry in the United States, including under that head the net product of manufactures, agriculture, fisheries, mines and quarries, in the single year covered by the census, amounts to $114.14 per capita, or, on the basis of 306 working days in the year, to 37 cents per working day for every man, woman, and child. A similar computation for Massachusetts, based upon figures obtained in the same census, shows an average per capita production of 66 cents per working day. The ratio, according to these figures, is 66 to 37, the excess being 29 cents a day.

The lengths of schooling for Massachusetts and for the country at large have slightly increased since Dr. Harris's statement, but their ratio has not materially changed. Whether we take Dr. Harris's earlier showing or Mr. Wadlin's later, the larger wealth-producing power accompanies the longer schooling, and the excess of the one follows very closely the excess of the other. Now this cannot all be a mere happening. If it is true that intelligence produces more than ignorance, then excess in wealth-producing power must hold some relation to excess in knowing and doing power.

Consider for a moment what is involved in the showing that each person in Massachusetts has a daily wealth-producing

power 29 cents in excess of the average for the nation at large. It means that for each person the average annual excess is $88.74. It means that for all the people of the state the annual excess is $198,686,802. That is to say, the productive energy of Massachusetts yields nearly 200 million dollars a year more than it would yield if the per capita productive capacity of the state were no greater than the average throughout the country. This is twenty times the annual running expenses of the public schools. It is not necessary to attribute to the schools this vast excess of production above the average for the country to prove that they pay enormous material dividends. If so humble a fraction as a fifth or even a tenth part of this excess, or of an aggregate much less than this excess, of 200 million dollars can be traced to the schools, they are yet securities that each year return to the state much more than their annual cost. The education of the people, combined with the openness of the avenues by which the people may rise, works in two ways. It stimulates material wants on the one hand; it makes them more numerous, complex, refined. And all this, on the other hand, makes a stronger call both for high directive ability and for skilled labor to supplement such direction. Thus the field for production is enlarged and, at the same time, husbandmen to till it are trained.

It is impossible, of course, to say how much the high school contributes to this industrial superiority, either indirectly in what it does for the school system as a whole or directly in the training it gives its own pupils. It is safe to assume, however, that if Massacusetts is to maintain its high place as a wealth-producing state it must rely more and more on doing the finer, the higher, the more difficult kinds of productive work,—work, therefore, whose trend it is to call for increasing skill not only in planning it but also in doing it when it has been planned. And this means that it is sound public policy to encourage drawing and other industrial aspects of education, to extend the systems of manual training, to establish textile and similar schools, to foster the higher schools of applied science, to make it possible, through state scholarships in such schools, for the promising poor to

receive that higher training which their minds merit but their purses forbid,—in short, to welcome any methods of education that promise to recognize more fully the realities of life and to do more for the motor and executive functions that need to be trained to cope with such realities. With such a public policy the public high school cannot but hold the closest and most vital relations. I do not myself rest the argument for the encouragement of such a policy on the mere material advantages that come from it. Its utilitarian values are recognized, indeed, but apart from all considerations of dollars and cents, there are intellectual and moral values of supreme moment that amply justify it. I need not dwell on these higher values in this presence. In our technical schools there is a growing appreciation of the æsthetic and ethical aspects of themes too commonly supposed to be outside the pale of such regard. In our literary schools, laboratory and manual exercises are winning steadily increasing recognition. I deem it a happy conjunction that so many who urge the spiritual argument are ready to unite with those who press the material in framing common curricula. Certain it is that schemes of education today may contemplate more directly than in former years the so-called utilitarian values without dethroning at all the traditional spiritual ideals.

Is the tone of this paper too optimistic? Let me frankly admit, then, that there are respects wherein the best of our high schools admit of great improvement; and as for the worst of them, nothing short of a vigorous shaking up of their dry bones will meet the exigencies of their case. One's attitude towards the high schools of the commonwealth turns very much on whether one is looking down the hill up which they have thus far come, or up the hill where they still ought to go. One may feel proud in the one case and solicitous in the other, rejoice in the movement hitherto and grieve that any break should check its triumphant advance. We have a right to be gratified, but no right to be satisfied. One of the strongest signs of an unhealthy state is perfect satisfaction with an existing state. Perfect satisfaction means easy satisfaction; easy satisfaction, a low ideal;

a low ideal, cessation of growth; and cessation of growth, retrogression and stagnation. When, however, the question is asked whether the facts justify the public in maintaining the high-school system, a broad view permits but one answer, and that answer, after making every allowance for imperfections, avoidable and unavoidable, is an unhesitating "yes,"—an answer that may be given with increasing emphasis as the system gains in efficiency.

DR. THOMAS M. BALLIET, Superintendent of Schools, Springfield: Mr. Hill has made the strongest defense of the high school as it now exists which I have ever heard. It seems to me the question of high-school education at public expense ought not to be an open one any longer in this commonwealth when our western states have their state universities, and even we have our agricultural colleges, supported by public taxation. In my judgment, the question as to how far education should be carried on at public expense is purely one, in the first place, of public sentiment and general intelligence, and in the second place, one of economy. The public school system exists not so much because the state must educate its citizens as a means of self-preservation, as because the people in the community want their children to be educated, and they find that they can accomplish it most effectively and most economically by clubbing together and supporting schools by public taxation. Mr. Hill has justified the high school as it now exists. I should like to suggest a possible extension of its work for which we may not be ready now, but which public sentiment is likely to demand some time in the future. To illustrate: There are now about 80 graduates of our local high school in the freshmen and sophomore classes of various colleges and scientific schools of college rank. The average expenses of these 80 students is not less than $550 each. It is more rather than less. The total annual expense to their parents, citizens of Springfield, is therefore about $44,000. It cost us last year $30,416.63 to run our high school. This includes free text-books, fuel, and all incidentals, as as well as tuition. In round numbers the school had 500 pupils. It therefore cost $13,584, more to educate 80 Springfield students in college last year than it cost to educate 500 at home, not taking into account cost of board of the latter. If these 80 students could have remained in the high school, we could have furnished a teaching force to teach them as well as they have been taught in college,

for about $8000, or at most $9000. Their parents would have had to board them at home. A fair average cost for this board would be $3 a week. For the college year of about 36 weeks this would have amounted to $8640. The total cost of educating them at home would therefore have been in round numbers about $17,000, only $9000 of which would have come out of the public taxes. There would thus have been a saving of about $27,000 in one year to citizens of Springfield. It seems to me as a matter of economy the public will demand some day that the high-school course be lengthened two years so as to cover the first two years of the college course. Such a course would make our leading high schools equal to what good colleges were 25 years ago, and would make them fitting schools for the universities, for law schools, and for medical schools, etc.

Higher education in this country is today in a far more chaotic condition than elementary and secondary education. We are just evolving real universities. Most of our colleges are doing strictly collegiate work during the first two years of their courses and are attempting to do university work the last two years. Only very few of them, however, have either the teaching force or the necessary facilities for original research which are absolutely essential to genuine university teaching. The work of the first two years of our colleges is simply a continuation of the high-school course. It ought to be considered a part of secondary education and not a part of higher education. The line of demarcation between secondary and higher education is not drawn at present where it should be. The high school could do the work of the first two years of college fully as well as the colleges are doing it. It would follow, of course, that we should have to secure as teachers for the higher classes in our high schools persons who have had not only a college education but also thorough university training. This grade of scholarship will soon be required, in any event, for the more important positions in high schools, and adding the first two years of the college to the present high-school course would simply hasten this desirable advance in the standard of high-school teaching.

The work of the last two years of the college can be done far more successfully by the universities and should be relegated to them. The high school should in the future aim to give the whole of that general training, commonly spoken of as "liberal culture," which is necessary to all lines of university work, and all special training should be relegated to the university. In the process of this reconstruction the

college would naturally drop out as a college, and university courses would be lengthened. What we need in higher education today is earlier and broader specialization.

The stronger colleges would be converted by this change into small universities, devoting themselves to a few special lines of work which they would have the funds to provide for; and the weaker colleges would do the same work as the high schools, and would come in competition with these schools as our academies did less than a generation ago.

This is not so radical a change as it would at first appear. In Germany and France the college as we know it in this country does not exist. Students pass from the gymnasium and the *lycée* directly to the universities and the professional schools. The course of study in a German gymnasium is about two years longer than in our high school. What is here suggested is therefore just what has been done for years in Germany and France with great success. The American high school can easily be made broader in its training than the German gymnasium, and it will not be difficult to avoid some of the weak features of that institution.

It seems to me such a step would have a very wholesome effect on our largest institutions; for even our leading universities, with the exception of two or three, have collegiate departments in which the great majority of their students are registered. It would, in the first place, relieve these institutions of the two largest classes in their undergraduate department and save them the expense of a good part of their teaching force. The money thus saved could be used to strengthen the higher departments. This would be equivalent in effect to additional endowments. The exceptions would be only those few institutions which charge more for tuition in the freshman and sophomore years than the instruction costs, and thus make the first two classes in the undergraduate department a source of revenue to the institution.

It would, in the second place, tend to make the teaching in these now overcrowded institutions more effective. Under present conditions they are compelled to resort to the lecture system of teaching, simply because they cannot afford sufficient teaching force to provide classroom instruction. This system in the case of a few professors is very effective; in the hands of the ordinary professor it is exceedingly ineffective. It would be impossible to fit boys either for Yale or for

Harvard by the lecture system. If it were not for the coaching by persons not on the teaching force and for the difficult final examinations, many boys would get very little from this system of teaching. The freshmen and sophomore work could be done more effectively in the high schools than in the colleges, since students in the high schools would be divided into groups small enough to make thorough teaching possible.

The social life and the good fellowship which now form so important a part of college training would not necessarily be lost in the changes here indicated. It seems to me it would naturally be transferred to the university. For obvious reasons it could never be developed in the high schools. It exists in foreign universities, especially in Germany, and there seems to be no reason why it could not be developed in our American universities.

DR. HULING: There are one or two considerations which I would like to mention in connection with the addresses of the morning. It is clear from Dr. Hill's review of the history of educational legislation in Massachusetts that the high school is the "survival of the fittest." The free public high school has proved itself the best adapted to meet the needs of Massachusetts communities, in the peculiar conditions which press upon them, of all the institutions for secondary education that have been tried. Our forefathers brought over with them the English public school, in which the leaders among them had been trained. It was impossible that private endowment should establish them upon a firm basis here as had been done in England. Therefore the towns undertook to accomplish the same service, and all through the leading communities of New England such schools were established by the initiative of the town, and were maintained by a combination of fees and town grants. After a century and a half of experience with this kind of school, it was found, as Dr. Hill has pointed out, that the experiment had failed. Then certain individuals or groups of individuals undertook, under great difficulties, to establish secondary schools, in which the leading families of the community might have their young people educated; and the state was later induced to assist them. Here private initiative was the leading interest, and the help of the state a secondary and very subordinate one. But that plan did not accomplish the purpose effectively save in favored localities, and so there arose the idea of establishing a secondary school that should be

completely free, opening it to all who could prepare themselves to enjoy its privileges. Under this policy the last three-quarters of a century has seen a wonderful development of secondary education, and the end is not yet. This history furnishes one answer, I think, to our main question today. There will in the next century be very little question of the wisdom of generous public support for secondary schools that really prepare pupils for useful lives. Private schools will always exist, and will serve valuable ends, but in the main it will be expected that the community as such shall take care of its children up to the end of a high-school course.

Another consideration has reference to the argument drawn from Dr. Harris's and Mr. Wadlin's statistics. A question may arise as to whether the superiority of Massachusetts working people over the average working people of the United States is not due somewhat to their ancestry. People will say, Is it not true that in Massachusetts, the home of the Puritans, there is more than elsewhere of the Anglo-Saxon blood pure and unadulterated? Unfortunately for that argument, later statistics show that Massachusetts is not now chiefly an Anglo-Saxon state. It is true, certainly, of the thickly settled parts of the state, that more than 50 per cent. of the people one meets upon the streets are not of native stock. They are of foreign birth or parentage. And I am not sure but statistics will show the same to be true of the state as a whole. We do not comprehend, unless we look into the matter, how complete a change has come over the population of Massachusetts since the days of the Civil War. It is not true that Anglo-Saxon ancestry is the chief element of the superiority of Massachusetts working people. There is no element in it which is more likely to be the effective one than that which Dr. Hill stated as probably the chief cause of this superiority — the superior advantages of education freely supplied by the commonwealth.

I should like to say one word also relating to this noble idea which Dr. Balliet has put before you, concerning the future of the high school. I do not know whether it is best for our educational interests in America that the college, as a distinctive institution, should be given up, and that we should have simply the secondary school on the one hand and the university on the other, as in France and Germany. But I know this, fellow teachers in the high school, that if any such thing as this is to come, we must prepare ourselves better for the added responsibilities thus imposed than we are today prepared. In Dr.

Hill's supplementary document, which has been distributed among you, you will find that in the high schools of Massachusetts (which are probably as well equipped with scholarly instructors as any high schools in the country) only 67 per cent. of the teachers appear to have had any higher education than the high school itself affords. If the state should, today, entrust the education now given in the first two years at the colleges to the high schools, it would be administered by a corps of teachers, one-third of whom have not had college education, or the equivalent of it. If this can be done successfully, strong reasons would need to be adduced to make the community believe it. I think there are some indications that Dr. Balliet's ideal is one toward which the educated public is tending. It is very likely, whether wise or not, to be a twentieth century realization. For this as well as more pressing reasons, those of us who are responsible for the selection of high-school teachers must be careful to choose those whom we know to be well furnished with academic and professional equipment for genuine secondary instruction.

PROFESSOR RICE: A word in regard to Dr. Balliet's paper. As might be expected from its authorship, it was original, fresh, and forcible, and well worth serious consideration. I confess it strikes me, however, that an attempt at present — whatever might be said of it as to the future — to abolish the American college, to convert the high schools into gymnasia, and to convert the the survivors of our colleges into universities of the German type, would be a move in the wrong direction.

It does seem to me that the American college, substantially as it is, taking boys and girls at about the age at which it does take them, and keeping them through just about the four years through which it does keep them, is a very serviceable institution. It seems to me that the American college, in precisely those points that have been referred to, does accomplish something, the lack of which is felt disastrously in the German system of education, in which there is a sudden and abrupt transition from the strict discipline that prevails in the gymnasium to the absolute lack of discipline that prevails in the university. There the transition is absolutely abrupt, from the strict discipline that belongs to childhood, to the absolute freedom that belongs to manhood; from the severely didactic processes of instruction, wherein the mind of the student passively submits to guidance, to the absolute

freedom of investigation, or attempt at investigation, which belongs to the fully developed man. And it seems to me that the abruptness of that transition is, in part, the cause of one of those features in German university life which every observer has recognized as utterly lamentable, namely, the fact that a large part of the students celebrate their emancipation from discipline by spending their first year, or their first two years in the university, in idleness and things that are worse than idleness. It seems to me that the American college, by making a gradual transition from the methods of discipline and instruction that belong to the lower schools, to the freedom and independence of investigation that belong to the university, carries the student over a critical period of his mental and moral development in a way which is decidedly more wholesome than the German method.

It seems to me that we would do a better thing if we should try to make the high school do high-school work better, and the college do college work better, than if we should try to transform our high schools into colleges and our colleges into universities. An institution that is intermediate between the secondary school and the university, wherein the strict discipline of the school passes by easy gradations into the freedom of the university; wherein the didactic methods of instruction in the school pass by easy gradations into the independent investigation of the university — such an institution seems to me to be an exceedingly wholesome thing, and I believe that the last thing we want to abandon in our American educational system is the American college.

While I am on my feet, I should like to say a word in regard to one or two points that were touched upon in the paper of Dr. Hill. He pointed out to us the conditions of the institutions of secondary instruction, under their different names of grammar (or Latin) schools and academies and high schools, in the different periods of the educational history of New England.

I want to call your attention a little more pointedly, perhaps, to the very striking difference between the first and last stage in their development — between the grammar school as it originally existed, and the high school as it is today.

The grammar school's purpose was preparation for college, and the curriculum was almost entirely Latin, Greek, and mathematics. The grammar school was a development of the colonial life of New England, before the thought of New England had really acquired a

democratic character. Our Pilgrim fathers were not by any means democrats. They were aristocrats. They were Englishmen, and their traditions and modes of thought were English; and it required an independent development, under new conditions, in a new country, to make the thought of their children democratic. There was then precisely that sharp distinction between classes and masses which Dr. Hill condemned, and claimed rightly should not be recognized in the life of today. There was a perfectly sharp distinction between the small class destined for the learned professions (the "Brahmin caste" of New England, as Dr. Holmes has felicitously called it), and the mass of the population, whose education in school was substantially limited to the three R's. The grammar school was precisely adjusted to that aristocratic idea of an educated class separated by a strong line of demarcation from the masses. The high school, as it is today, is as thoroughly democratic an institution as the old Latin school was aristocratic. It is related to a type of society with no sharp distinction between the educated and the uneducated class, but only with what must ever exist, the indefinite gradation of more and less educated. The high school has become therefore the people's college. It has given opportunity for a genuinely liberal education to those whose circumstances do not allow them to take an extensive course in the preparatory school and college; and the high school, therefore, becomes eminently a representative of the characteristics of our age, a thoroughly democratic institution in our democratic society.

I would say most hearily "amen" to the doctrine advocated by Dr. Hill, that there ought to be such a relation between the college and the high school, that not one particular course in the high school, but all the courses, should fit a student for college. The ideal educational system is a system with so complete a unity through all its grades, that at any particular stage the student will have received the education that will best fit him for practical life if his schooling must end at that stage, while, at the same time, he will have received the best preparation for subsequent training in case he is permitted to go further in the educational course. Now, the course of study in the Latin school, and the classical preparatory course in the high school, makes no approximation to that condition. No one would claim that the Latin, Greek, and mathematics, as taught in the old Latin school, or even the somewhat modified form of the same discipline which exists in the classical course of the high school today, is the best

educational course for a student who must finish his schooling in that institution. It is not a small body of education, complete and symmetrical in itself. It is a torso of a big body of education, which the student cannot make complete and symmetrical if he is unable to go to college. In this respect there is need of most radical reform. And I believe the tendencies in that direction are making themselves felt. The report of the Committee of Ten shows the direction in which the relations between the colleges and the high schools must be modified. The colleges must adapt themselves to the democratic institution of the high school, and not to the aristocratic and obsolete institution of the Latin school.

With this the discussion closed, and the thirteenth annual meeting of the association came to an end by adjournment.

RAY GREENE HULING,
Secretary

CAMBRIDGE, MASS.

BOOK REVIEWS

Selected Letters of Cicero. By FRANK FROST ABBOTT, Professor of Latin in the University of Chicago. Ginn & Co.

ONE examines and uses this book with ever-increasing pleasure, becoming more and more convinced that he has at last been given an entirely adequate college edition of the letters. Nor is this surprising when one considers the peculiar fitness of the editor for his task. This book is not the result of a hurried preparation, but brings together the results of long investigation in the two fields which must most be worked by students of the letters — the history of the times, and colloquial language. To this must be added that the work is carried out with rare judgment in every respect, both as to what should be included or excluded and as to relative values.

The letters evidently afford the best means of studying the life and character of Cicero himself, and the best center from which to study the political history of the most interesting period of Rome's development. It is with full appreciation of their value from both points of view that the editor has approached his task. He is known to believe that for these reasons and because of their greater interest the letters might advantageously be substituted for the orations in preparatory work; though many teachers would question the advisability of forcing upon students, at a time when their attention must be so fully occupied with matters of language, the necessity of studying so minutely the details of so many years of Cicero's life. However this may be, this book is prepared with an eye single to the needs of the college student above the freshman class, who unquestionably ought to read the letters. Experience shows that it is admirably adapted to their needs.

In his choice of letters the editor has aimed at selecting the hundred which should best represent the whole, including those which throw light upon Cicero's private life and relations with his friends, and those which present an outline of his public life and of his times,

The general introduction deals chiefly with the life of Cicero in relation to his times, and with the language of the letters. Here as

everywhere the most painstaking care has been used; though as a result it reads so smoothly that a hasty reader might be in danger of overlooking the care with which it was written, were it not for the convenient references in footnotes by which every statement is supported. The view taken of Cicero's public career is consistent, appreciative but not partisan, keeping an even course between the undue adulation occasionally given to this side of his life and the more common excessive condemnation. The portion devoted to language and style is thorough and careful, and at least less useless to the average student than such summaries of individual peculiarities usually are.

The notes are well condensed, yet full enough, and seem to give precisely the help needed. Not much direct translation is given. What there is is usually very happily worded. Especially good are the introductory notes to the individual letters, which give in brief just what the student needs to be told in addition to the information already given him in the general introduction.

ARTHUR TAPPAN WALKER

UNIVERSITY OF KANSAS

NOTES

AN early number of the SCHOOL REVIEW will contain an article on "The Decentralizing Movement in French Education," by Anna Tolman Smith, of the United States Bureau of Education."

THE Macmillan Company announce for early publication *General Physiology: an Outline of the Science of Life;* by Max Verworn, M.D., Ph.D., Professor of Physiology in the Medical Faculty of the University of Jena. Translated from the second German edition and edited by Frederic S. Lee, Ph.D., adjunct Professor of Physiology in Columbia University.

Fourteenth Holiday Conference.—The fourteenth holiday conference of Associated Academic Principals of the State of New York will be held at Syracuse, Tuesday, Wednesday and Thursday, December 27–29, 1898. Topics of great educational importance will be discussed, and mutual acquaintance and good-fellowship will be promoted. Unusual interest attaches to the meeting of this year as the question of syllabus-revision in its various phases will be under consideration. Every principal of a secondary school and every friend of secondary education is earnestly requested to attend and share in the discussions.

NEW PUBLICATIONS

EDUCATION, PHILOSOPHY, PSYCHOLOGY

The Old and the New. Address at the Seventh Annual Commencement Leland Stanford Junior University. By Walter Miller, Professor of Classical Philology, Leland Stanford Junior University. Pamphlet, 33 pp. Stanford University Press.

A Generation of Cornell, 1868–1898. Being the address given June 16, 1898, at the Thirtieth Annual Commencement of Cornell University. By Jacob Gould Schurman, President of the University. Magazine size, vellum cover; pp. 56. New York: G. P. Putnam's Sons.

Work and Play in Girls' Schools. By three head mistresses, Dorothea Beale, Lucy H. M. Soulsby, Jane Frances Dove. Size 5 x 7½ in.; pp. x + 433. Price $2.25. New York: Longmans, Green & Co.

Educational Creeds of the Nineteenth Century. Edited by Ossian H. Lang, author of "Outlines of Herbert's Pedagogics," "Comenius," "Basedow," etc. Paper cover; pp. 162. (Vol. IV, The Practical Teachers' Library, No. 1. September 1898.

ENGLISH LANGUAGE AND LITERATURE

A Syllabus of English Grammar. By L. C. Foster, for twenty years Principal of Grammar School No. 1, Elmira, N. Y., and twenty years Superintendent of Schools, Ithaca, N. Y. Revised editions, with additions by H. W. Foster, Superintendent of Schools, Ithaca, N. Y. Size 5 x 7¼ in.; pp. viii + 160. Price 60 cents. The Macmillan Company.

Lakeside Series. English Readings for High Schools. Essay on Burns. Carlyle.

The Last of the Mohicans. By Fenimore Cooper. With colored illustrations by H. M. Brock. In two volumes. Price $3. Macmillan.

Poetry for Children. By Charles and Mary Lamb. Illustrated by Winifred Green, with a prefatory note by Israel Gollancz. Size 4 x 7½ in.; pp. 127. Price $1. J. M. Dent & Co.

English Readings for High Schools. Lakeside Series:

Carlyle's Essay on Burns. Illustrated, with an introduction. Containing also a review based on a structural standpoint, with a synopsis, numbered, referring to the paragraphs of the Essay, which are also numbered. Prepared by Mr. W. F. Slocum, of the South Division High School, Chicago. Containing also "Burns as a Man of Letters," from Carlyle's "Heroes and Hero Worship." Enameled covers; pp. 104. Price 15 cents.

Selections from Burns' Poems and Songs. In two parts. Illustrated, with a portrait and views of Scottish scenery illustrative of some of the selections, with Glossary. Printed on fine paper. Enameled covers; pp. 100. Price 15 cents.

The two volumes above also bound in one volume, boards. Price, 25 cents.

The Queen's Story Book. Being Historical Stories collected out of English Romantic Literature in Illustration of the Reigns of English Monarchs from the Conquest to Queen Victoria. Edited, with an introduction, by George Laurence Gomme. Illustrated by W. H. Robinson. Size 5 x 7¾ in.; pp. xii + 446. Price $2. New York: Longmans, Green & Co.

Riverside Literature Series, No. 127. Ode on a Grecian Urn and other Poems, by John Keats, with biographical sketch and introduction and notes. Houghton, Mifflin & Co.

Red Rock. A Chronicle of Reconstruction. By Thomas Nelson Page. Illustrated. Size 5 x 7¾ in.; pp. x + 584. Price $1.50. Scribners.

The Bashful Earthquake and other Fables and Verses. By Oliver Herford, with many pictures by the author. Size 5 x 7¾ in.; pp. viii + 126.

MODERN FOREIGN LANGUAGES AND LITERATURES

Goethe's Iphigenie auf Tauris. With introduction and notes by Charles A. Eggert, Ph.D., formerly Professor in the University of Iowa. Size 4¾ x 7 in.; pp. lxi + 180. Price 60 cents. The Macmillan Company.

Schiller's Jungfrau von Orleans. With introduction and notes by Willard Humphreys, Ph.D., Professor of the German Language and Literature in Princeton University. Size 5 x 7 in.; pp. xlv + 259. Price 60 cents. Macmillan.

Freytag's die Verlorene Handschrift. With introduction and notes by Katherine M. Hewett. Size 4¾ x 7 in.; pp. xlviii + 223. Price 60 cents. Macmillan.

HISTORY, POLITICAL AND SOCIAL SCIENCE

Annals of the American Academy of Political and Social Science, Vol. XII, No. 2, September.

Social Elements — Institutions, Character, Progress. By Charles Richmond Henderson. Size 5½ x 8 in.; pp. ix + 405. Price $1.50. Scribners.

History Reader for Elementary Schools. Arranged with special reference to holidays. By L. L. W. Wilson, Ph.D. Size 4¾ x 7 in.; pp. vii + 403. Price 60 cents. The Macmillan Co.

Studies in European History. Grecian and Roman Civilization. With an Introduction to the Source Study Method. By Fr. Morrow Fling, Ph.D., the University of Nebraska. Flexible cover. Size 5¼ x 7¾ in.; pp. xxv + 163. J. H. Miller, Lincoln, Neb.

The Elements of Sociology. A Text-book for Colleges and Schools. By Franklin Henry Giddings, M.A., Ph.D., Professor of Sociology in Columbia University, New York. Size 5½ x 8 in.; pp. vii + 355. Price $1.10. The Macmillan Company.

De Soto and His Men in the Land of Florida. By Grace King, with illustrations by George Gibbs. Size 5¼ x 7¾ in.; pp. xiv + 326. Price $1.50. The Macmillan Company.

Publications of the American Academy of Political and Social Science:

No. 235. The War as a Suggestion of Manifest Destiny. By H. H. Powers, Ph.D., Professor of Economics of the Leland Stanford Junior University.

No. 236. Australian Experiments in Industry. By Helen Page Bates.

No. 238. The Unit of Investigation or of Consideration in Sociology. By Samuel McCune Landsay, Ph.D., Assistant Professor of Sociology at the University of Pennsylvania.

No. 239. The History of Fiat Money and Currency Inflation in New England from 1620 to 1789. By Frank Fenwick McLeod.

Johns Hopkins University Studies, in Historical and Political Science Series XVI, Nos. 10–11. The Transition of North Carolina from Colony to Commonwealth. By Enoch Walter Sikes, Ph.D., Professor of History, Wake Forest College.

SCIENCE

The Elements of Physics. A Text-book for High Schools and Academies. By Alfred Payson Gage, Ph.D. Revised edition. Size 5 x 7½ in.; pp. viii + 381. Price $1.20. Ginn & Co.

The Discharge of Electricity Through Gases. Lectures delivered on the occasion of the Sequicentennial Celebration of Princeton University. By J. J. Thomson, professor in the University of Cambridge. With diagrams. Size 5 x 7½ in.; pp. 203. Price $1.00. Charles Scribner's Sons.

Observation Blanks for Beginners in Mineralogy. By H. E. Austin, Professor of Chemistry, Mineralogy, and Botany, Maryland State Normal School. Board cover. Size 7 x 8½ in.; pp. 75. Price 30 cents. D. C. Heath & Co., Boston.

Carpenter's Geographical Reader. North America. By Frank G. Carpenter. Cloth, 12mo, 352 pages. With colored maps and half-tone illustrations. Price 60 cents, American Book Company, New York, Cincinnati, and Chicago.

Elementary Zoölogy. By Frank E. Beddard, M.A. (Oxon.), F.R.S. Size 5 x 7½ in.; pp. 208. Price 90 cents. New York: Longmans, Green & Co.

Elementary Botany. By George Francis Atkinson, Ph.B., Professor of Botany in Cornell University. Size 5¼ x 7½ in.; pp. xxiii + 444. Henry Holt & Co.

Nature Study for Grammar Grades. A Manual for the Guidance of Pupils below the High School in the Study of Nature. By Wilbur S. Jackman, A.B., Department of Science, Chicago Normal School. Author of Nature Study for the Common Schools, etc. Size 5 x 7½ in.; pp. 407. Danville, Ill.: Illinois Printing Co.

An Introduction to Machine Drawing and Design. By David Allan Low (Whitworth Scholar), M.I., Mech.E., Professor of Engineering, East London Technical College (People's Palace), London. Size 5 x 7½ in.; pp. v + 187. New York: Longmans, Green & Co.

Appleton's Home Reading Books. The Earth and Sky. A Primer of Astronomy for Young People. By Edward S. Holden, Sc.D., LL.D. Size 4½ x 7¼ in.; pp. xxi + 116. D. Appleton & Co.

Introduction to Chemical-Technical Analysis. By Professor F. Ulzer and Dr. A. Fraenkel, Directors of the Testing Laboratory of the Royal Technical Museum in Vienna (authorized translation), with Appendix by the translator, Hermann Fleck, Nat. Sc. D., Instructor in Chemistry, University of Pennsylvania. Illustrated. Size 6 x 8¼ in.; pp. vii + 188. Price $1.25. Philadelphia: P. Blakiston's Son & Co.

Commercial Organic Analysis. A Treatise on the Properties, Proximate Analytical Examination, and Modes of Assaying the various Organic Chemicals and Products employed in the Arts, Manufactures, Medicine, with Concise Methods for the Detection and Determination of their Impurities, Adulterations, and Products of Decomposition. By Alfred H. Allen, F.I.C., F.C.S. Third edition, Illustrated. With revision and addenda by the author and Henry Leffmann, M.A., M.D. Vol. I: Introduction, Alcohols, Neutral Alcoholic Derivatives, Sugars, Starch and Isomers, Vegetable Acids, etc. Size 6 x 9 in.; pp. xii + 557. Price $4.50. Philadelphia: P. Blakiston's Son & Co.

Physico-Chemical Methods. By Dr. J. Traube, Privatdocent in the Technical High School of Berlin. Authorized translation by Willett L. Hardin, Ph.D., Harrison Senior Fellow in Chemistry, University of Pennsylvania, with ninety-seven illustrations. Size 6 x 9 in.; pp. vii + 238. Price $1.50. Philadelphia: P. Blakiston's Son & Co.

MATHEMATICS

An Introduction to Graphical Algebra. For the use of High Schools. By Francis E. Nipher, A.M., Professor of Physics and in charge of Electrical Engineering in Washington University. Size 5 x 7½ in.; pp. iv + 61. Price 60 cents. Henry Holt & Co., New York.

Text-Book of Algebra. With Exercises. For Secondary Schools and Colleges. By George Egbert Fisher, A.M., Ph.D., and Isaac J. Schwatt, Ph.D., Assistant Professor of Mathematics in the University of Pennsylvania. Part I. Size 5½ x 8; pp. 683. Philadelphia: Fisher & Schwatt.

RELIGION

The Religion of Babylonia and Assyria. By Morris Jastrow, Jr., Ph.D., Professor of Semitic Languages in the University of Pennsylvania. Size 5¾ x 8¼ in.; pp. xii + 780. Price $3.25. Ginn & Co.